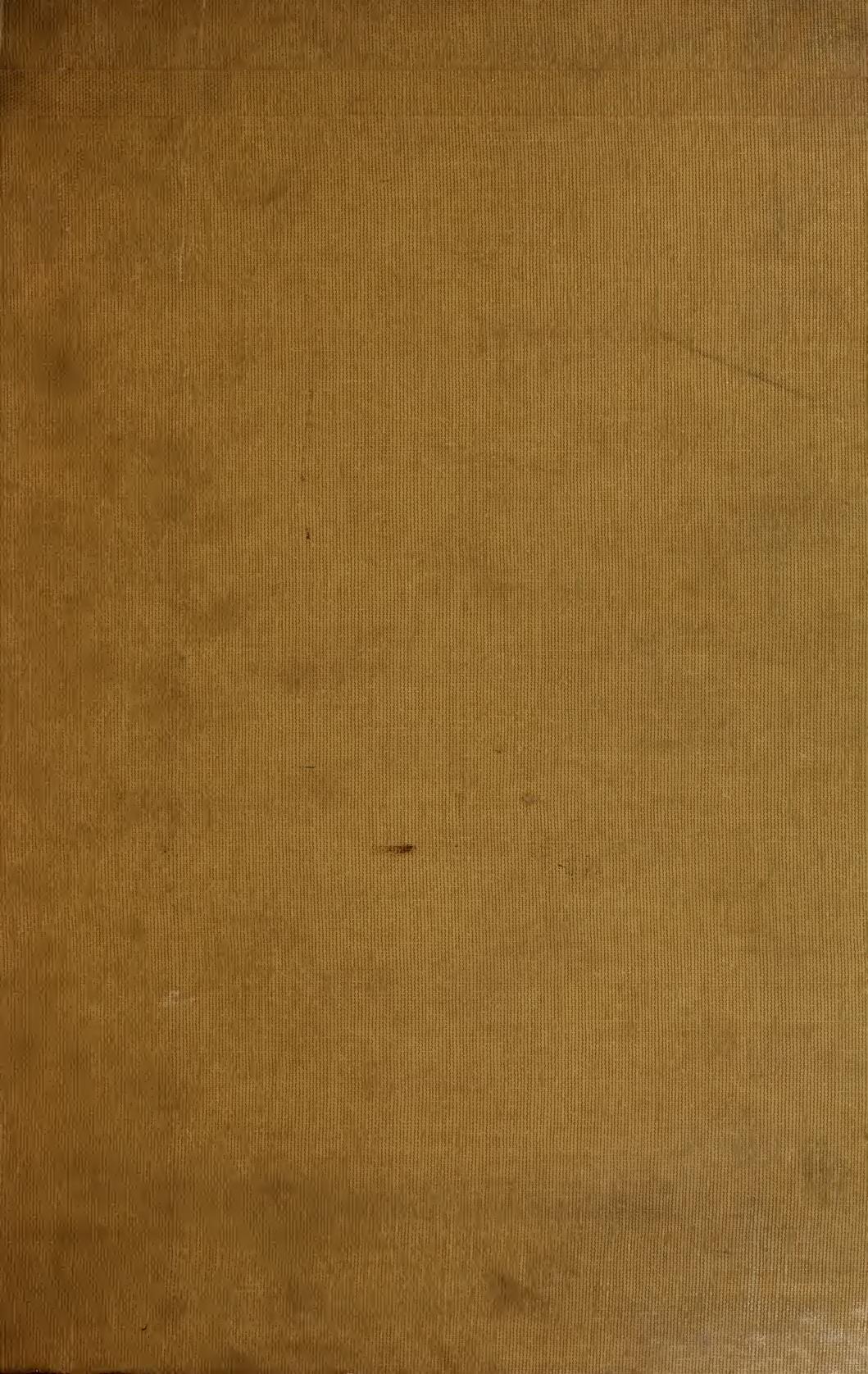
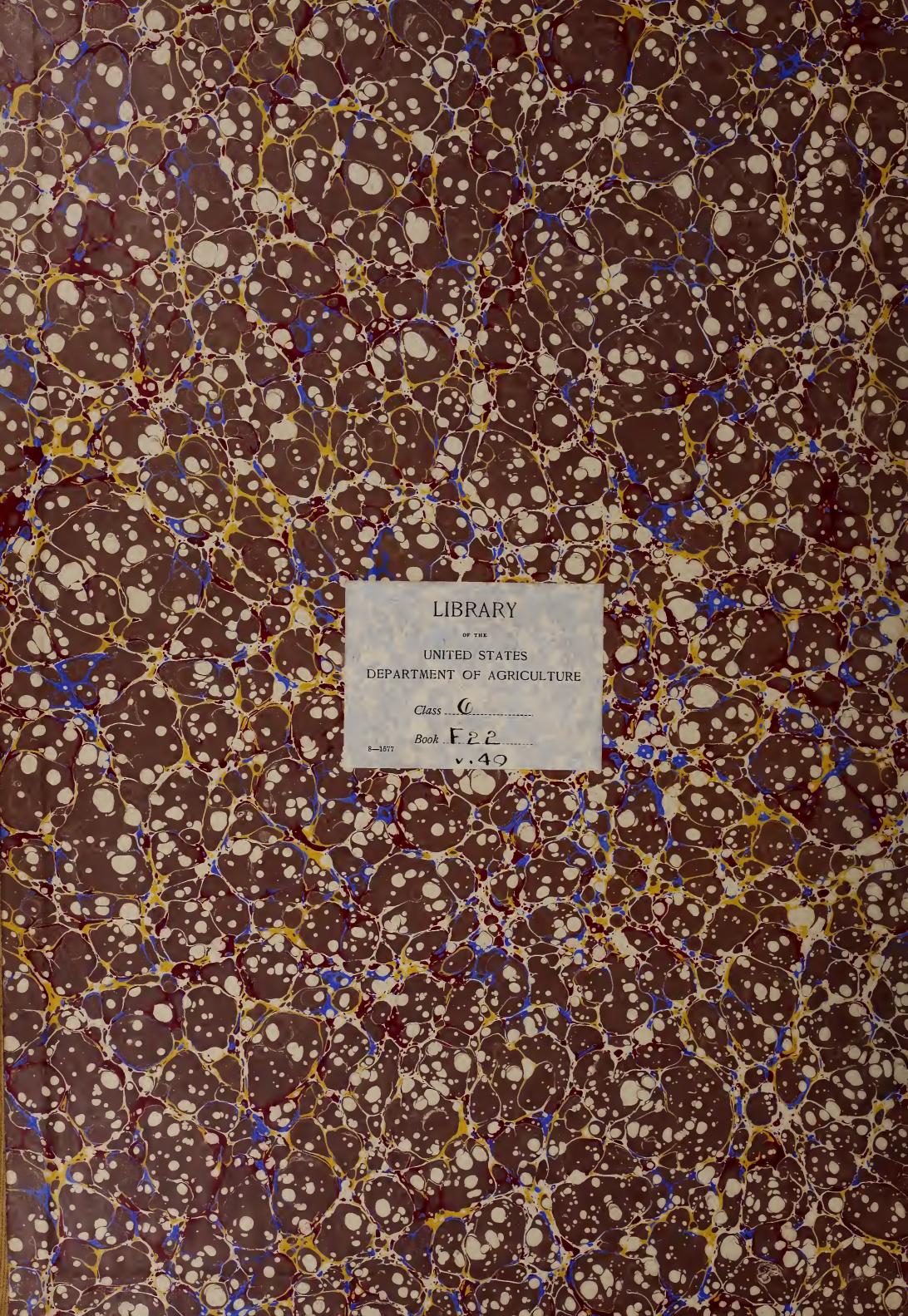
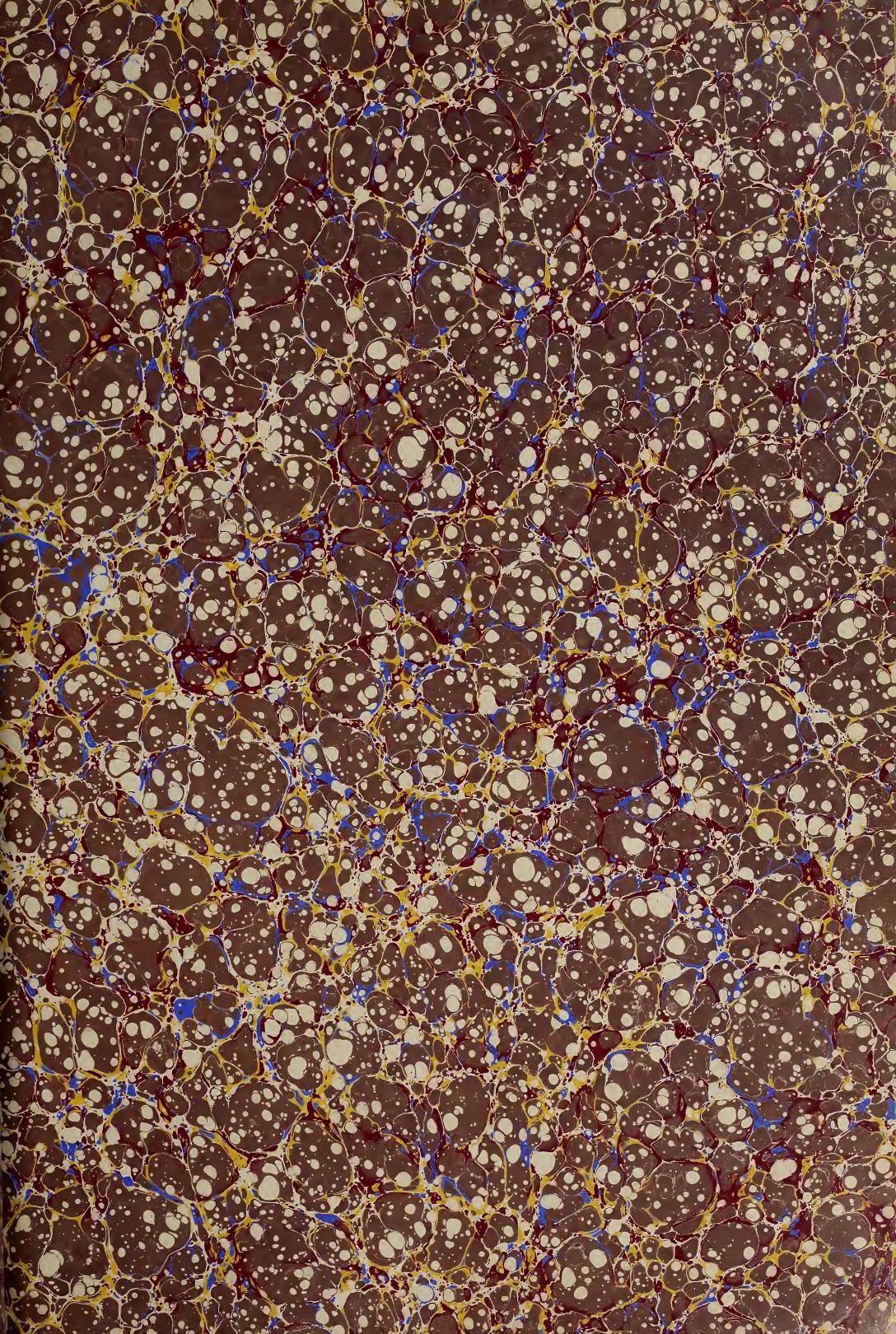
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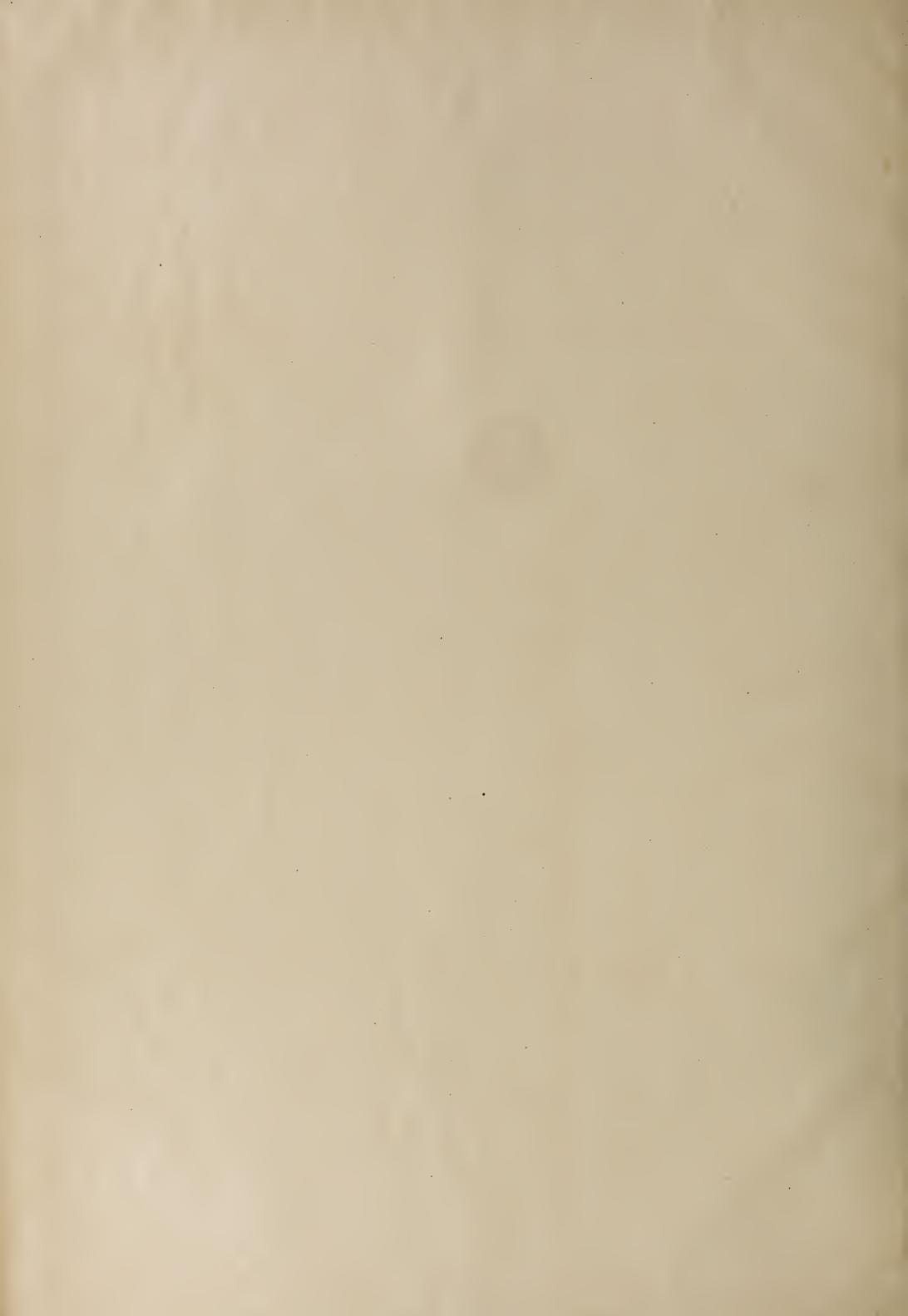
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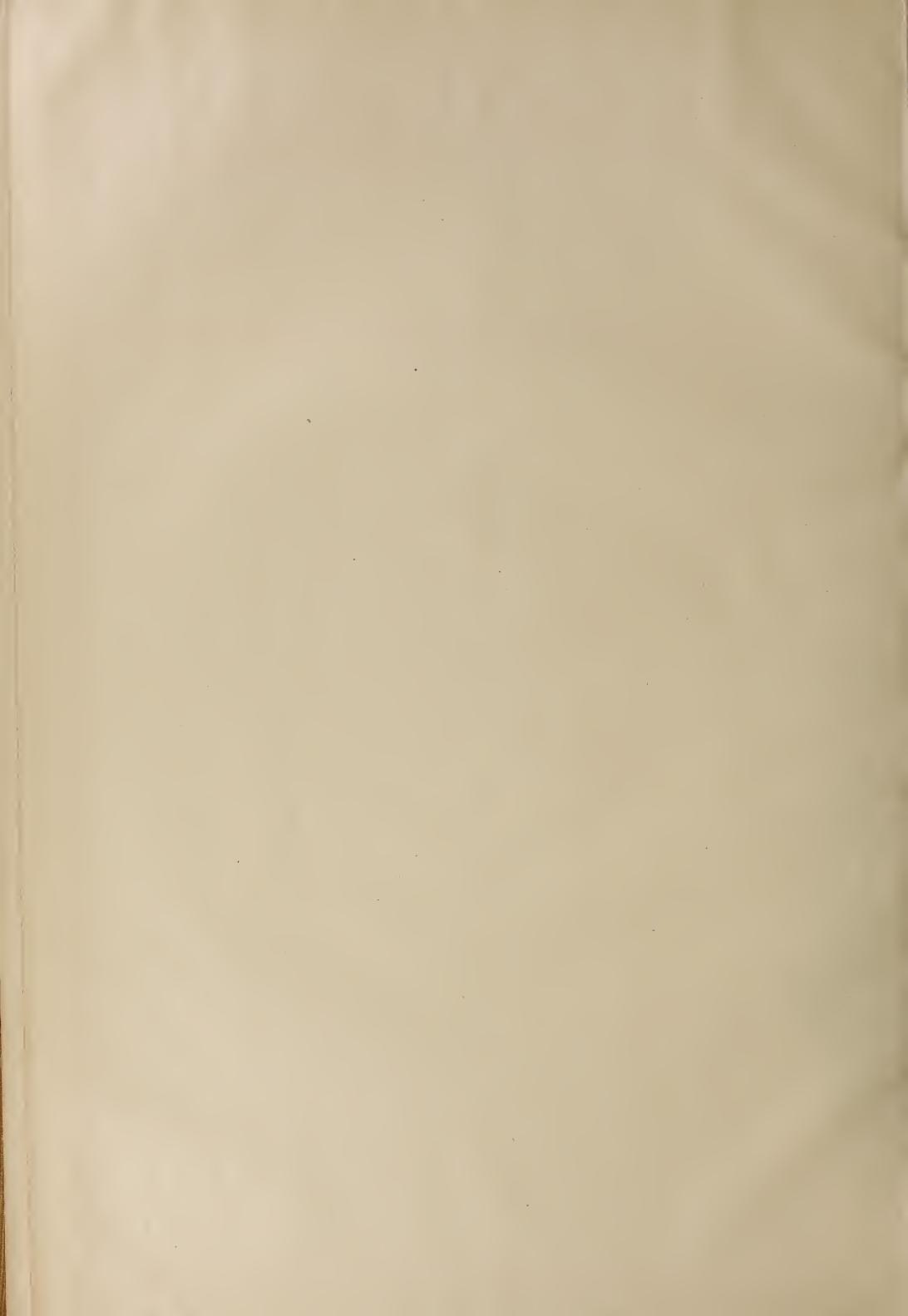


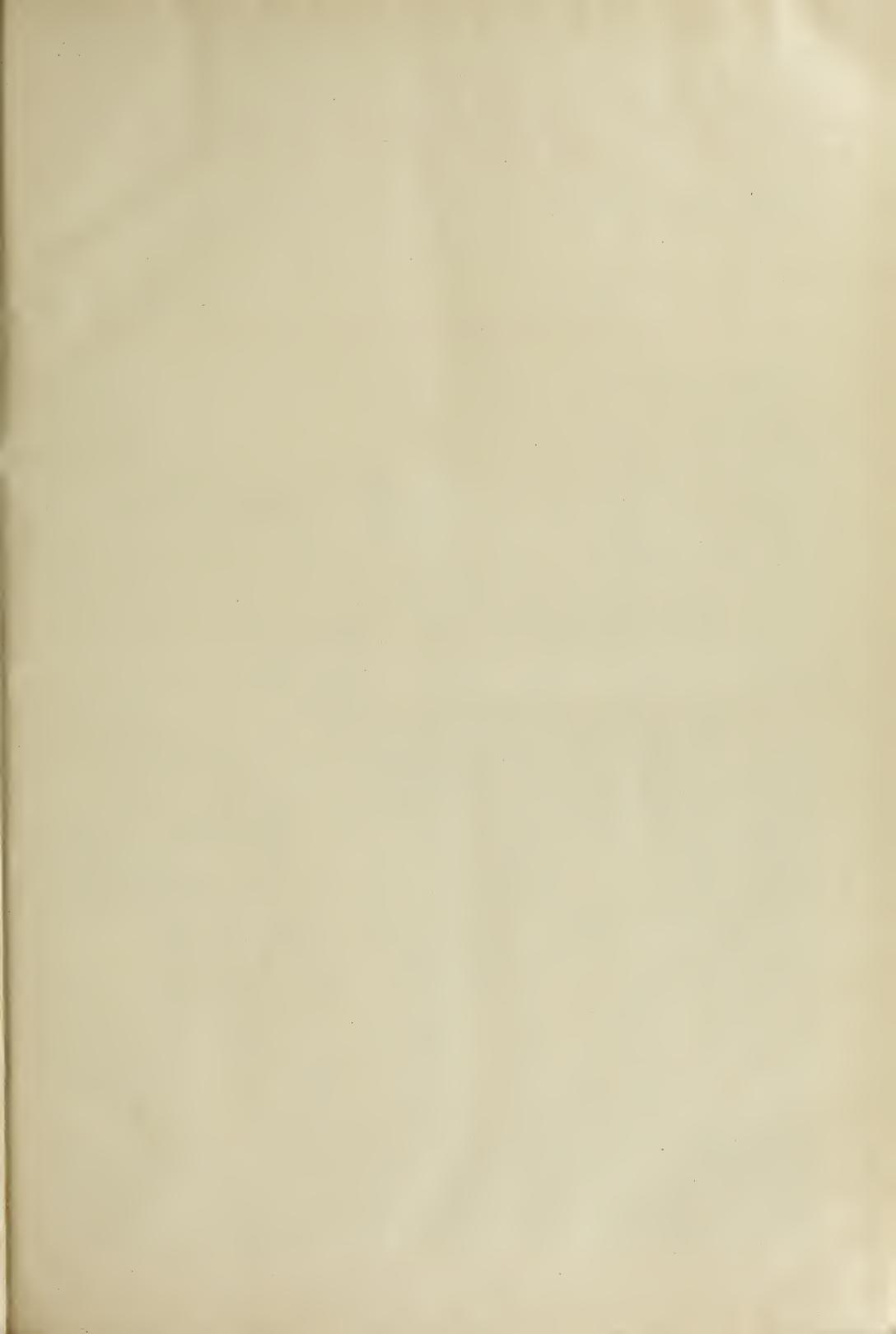


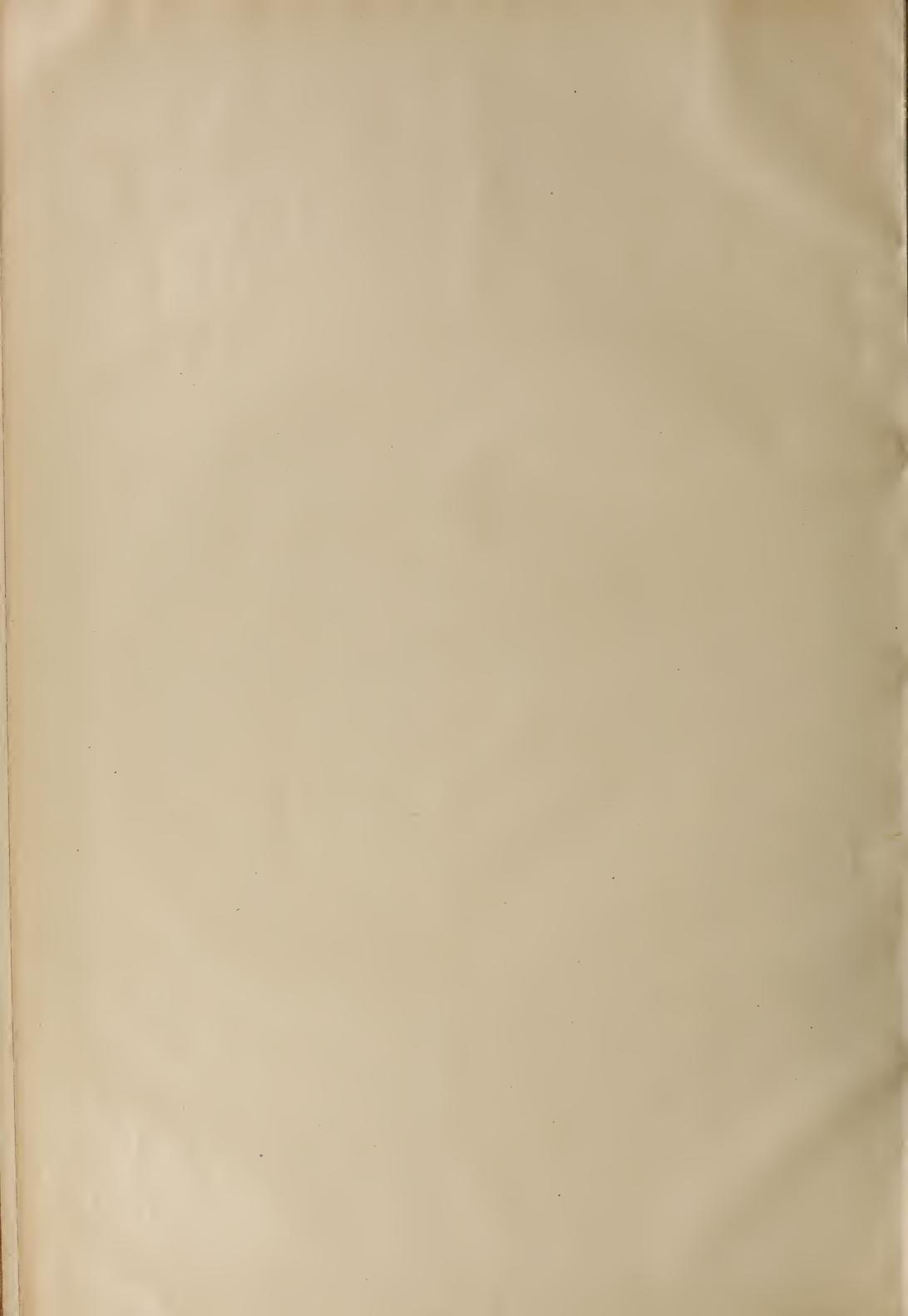












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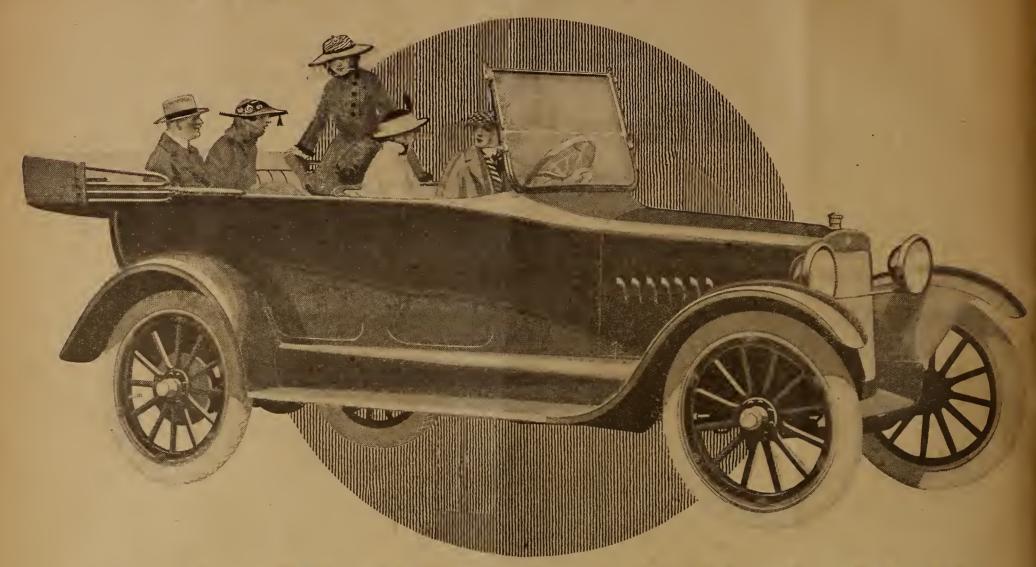
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The crankshaft is now a full 2", and this has materially increased the smoothness and quietness of the power-flow. Other detailed improvements in the motor have brought Saxon "Six" motor to a point where it fairly rivals in efficiency the motors in the highest priced cars.

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No. 1

Raising and Selling Horses

How the Draft Colts Grow, and What the City Buyers Want

By J. H. S. JOHNSTONE

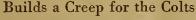
IF YOU want your horses to weigh as much as they can weigh when they reach maturity, and if you desire to sell them for the top price—you should read this article.

THE EDITOR.

UCCESS in breeding horses is based on a somewhat complicated foundation: if a man really likes horses, will use the right sort of parent stock, and feed the youngsters properly, there is no reason why he should not come through handsomely. Most American farmers make the mistake of not feeding their colts enough. It is an axiom in horse-breeding that any horse makes at least one half of his ultimate legitimate growth during his first year.

If the design is to rear a draft animal which at maturity shall weigh from 1,600 to 2,000 pounds and the colt does not weigh on his first birthday from 800 to 1,200 pounds, he will never do what he was intended to do. No matter how lavishly a horse may be fed in after life, if he is starved and stunted as a foal and in a lesser degree as a yearling, he will never amount to nearly as much as he would have if he had been rightly fed from birth.

"Foals should be taught to eat grain as soon as they will take it," said W. S. Corsa of Greene County, Illinois, a short time ago. "We aim to let our foals get all the crushed or rolled oats they will eat. We try to get them started as soon as they will nibble at it, and there is always a supply for them to run to as often as they care to. If their dams must work—and most of the pure-bred mares on my farms have work to do quite regularly—we keep the little follows in darkoned box stalls during the heat of the have work to do quite regularly—we keep the little fellows in darkened box stalls during the heat of the day. A low box is fitted into a corner and a supply of the crushed or fluffed oats is always there.



"WHEN the mares are idle, running in the field, we use a creep, fixing a fence with a single line of poles quite high up, surrounding a trough. In the trough we keep fluffed oats and a pick of bran for the foals, which can duck down and get below the pole but cannot be which can duck down and get below the pole but cannot be followed by their mothers. The mares get their grain feed regularly, idle or working, and the milk is always plentiful and rich. In that manner we give our foals a great start. They do not mind weaning much at all, and they grow into their yearling form without having any setback at all."

If a foal is well fed while sucking its mother, is accustomed to eat grain and hay, and generally can take care of himself, the process of weaning is a very simple one. Merely remove the youngsters so far away from their mothers that they can't hear each other, and they will soon forget. must of course be taken to dry the mares up properly, and when that is accomplished they may be put back to work again without further delay.

Having brought the foals to see their first cold spell, the proper way is to let them run together in pairs or larger numbers. Two foals will do relatively much better than one. They love company, and if there is only one foal on a farm it always pays to buy a second. When cold weather sets in they should have a warm shed and plenty of bedding, but they should not be EW



That any colt makes one half of his ultimate growth before he is a year old is an axiom in horse-breeding

permitted to run with the other and older horses. Plunging through the cornfields deep in mud or frozen hard as concrete, and as rough as fireguards, is bad for the tender feet of foals, breaking off the

is bad for the tender feet of foals, breaking off the horn and otherwise promoting unsoundness.

Foals running with older horses always get the worst of everything, are shoved here and there, and never get their share of the feed. They should be fed what grain they will clean up, so long as they are not getting too fat or otherwise showing they are getting too much feed. They should have the best and freshest of hay fed as often as possible. Foals are notional little fellows and like to nose over their forage quite a bit. If big bunches of it are thrown to them they will waste the half of it, whereas if it is fed a little at a time and often, far less will do, and give far better results.

give far better results.

Dan Augstin of McLean County, Illinois, another successful horse breeder, told me that his two-year-

old stallions had nearly always averaged 2,000 pounds, when sold at thirty months of age. "As yearlings," said he, "we aim to give them what grain they will eat—oats mostly, with some corn, until the grass gets good. Then we drop off the grain feed considerably. Sometimes, if the pastures are at their best, we stop feeding grain entirely, but whenever the grass begins to fail we start in again with oats and corn, half and half by weight. We always aim, too, to let the colts have some bright dry hay handy where they can eat it whenever they want it on the grass. This is an important point. It is surprising how much good hay a colt on grass will eat in his year-ling form. We let them run in the fields as long as we can, sometimes until cold weather. If one or more gets too 'cagy,' we put them by themselves. Our aim is to keep the yearlings growing as fast as they will come along and keep sound."

The same method of feeding can be used with all sorts of horses. Breeders of pure-breds have to bother with stallions, whereas farmers catering only to the general commercial trade have no such troubles, as the geldings are as easily done with as fillies. In the winter time it is usually best to let the yearlings run in a bunch by themselves. They will gain enough more to make the extra trouble pay. They are still not big enough to wrestle and hold their own with the older horses. They should have a liberal grain ration during the winter, and when spring comes again should go to grass in full-fleshed condition. At first, again, they should have some grain, but soon it may be stopped and dependence placed on the pasture alone for sufficient growth until the grass begins to fail in the fall, when green cornstalks and some dry grain should again be fed.

To Winter Geldings Cheaply old stallions had nearly always averaged

To Winter Geldings Cheaply

W. E. PRICHARD of LaSalle County, Illinois, veteran of the horse trade, said regarding the wintering of two-year-old commercial geldings: "We

wintering of two-year-old commercial geldings: "We find they do not require a great amount of grain—just a little once a day, combined with good forage to keep them gaining all the time. In the springtime when they are three-year-olds, if they have been properly brought along, they will be lusty and strong, perfectly able to go into the harness, and do a great deal of work. Of course, when they are being broken and when ultimately put to work in the harness, they must be full fed; indeed, they should get all they will clean up, so as not to suffer unduly in their first attempts to earn their living. If colts have been brought out as they should be, they will out as they should be, they will be a ready sale at three years of age, or they will do enough work on the breeder's farm to far more than pay for all they have cost theretofore."

This lands our colts broken at three years old. During the next two seasons they will do all the work that is needed on the farm, and when five years old they will be ready for the buyer. Most farmers prefer to let their horses go right out of the harness, and leave to someone else the expense and risk of fattening them for market. Top prices are not paid for thin horses. City buyers who pay good prices for commercial horses want flesh and good looks, so someone must undertake the fitting of them. all the work that is needed on

"We are finding great diffi-culty in rounding up feeding horses," said Jake Siegel on the Chicago market recently. "The farmers seem to have quit breeding [CONTIUNED ON PAGE 11]



City buyers want horses with lots of flesh and good looks. Some buyers will pay from \$50 to \$75 more for a horse if he is fat than if they can see his ribs

Training the Colts

Well-Behaved Horses Develop from Well-Handled Foals

By E. A. WENDT

Y EXPERIENCE has been that there is only one right way and time to begin breaking a colt, and that is before it is weaned. From that time the colt should be handled all over each day, so that it will be as natural for it to have its feet handled, to have harness thrown on, and to carry things on its back as it is for it to eat

it to eat.

If this method were always carefully followed there would be few kickers. In this way it is easy to accustom the colt to being led about with halter and bridle and to going fearlessly up to automobiles, engines, and everything at which it would ordinarily

become scared.

When introducing a colt to any strange object, I avoid everything that could startle it, as at such moments they attribute a blow, a jerk, or anything that causes them the slightest pain to the strange object of which they are more or less afraid and from

which they are expecting injury. At such times it is very easy to spoil a colt so that it will always fear that particular object. I have lead colts up to objects they dreaded when their hearts were pounding not unlike a well-muffled exhaust and when even a sparrow sailing over would cause them to be wild-eyed,

crouching, and trembling.

At such times they need to have the greatest possible confidence in the men

At such times they need to have the greatest possible confidence in the men handling them, and if these men are of the excitable, loud-mouthed, or whip-flashing variety the colts will be made worse instead of better.

I never hurry at such times. I lead the colt as near the strange object as he will go without forcing. When he stops I let him think I want him to stop, and pet him and handle him. I do anything to make him feel easy and natural; at the same time I keep working a little bit closer to the object he fears.

This requires time and patience, but is well worth the trouble if well managed, and the more often this plan is employed the less trouble you will have in getting him up to the next thing he fears.

I never strike a colt when he is frightened. I do not jerk or yell at him. The excitable, noisy man can never become a good horseman unless he first learns to control himself at all times.

Nothing is easier than to spoil a colt.

Take harnessing: The quietest colt can be made to fear harness by throwing it on him roughly or if anything about the harness hurts him. The really valuable, high-strung, nervous colt is quite likely to kick the harness off. Wouldn't you? Anyway, if you had never worn anything until you were about eighteen, or proportionately as old as the three-year-old colt.

High-strung colts are more sensitive to pain than the average man or boy, and can hardly be expected

High-strung colts are more sensitive to pain than the average man or boy, and can hardly be expected to have as clear an understanding of what is required of them.

Compares a Colt to a Boy

THE untrained three-year-old can only be compared to an eighteen-year-old boy who has never worn clothing, never learned to talk or to understand words, and knows absolutely nothing but to eat what

is given him and wish for more—if you can imagine such

That is why, in teaching colts to work, there is only one method that will apply to all, and that is to have them grow up accustomed to the feel of the collar and other harness, to the commands he must understand, and to the work he must do, just as the boy is taught his A B C and to play at things he will work at later.

If a boy grew to manhood without doing a stroke of work—or play-work—it would be some job to break him in. Play-work is good for either. The colt should start with a few minutes in harness and nothing to draw, and work up to drawing something very light, as a log-chain and so on, as he grows.

He should go between thills quite young, and become so familiar with them that he does not object when they are rattled or slap his sides. Later, attach holdbacks and traces and teach him to back, turn,

and hold back.

I start with one or two commands and teach him to understand and obey them; then I add one by one until he has mastered all that will be needed. I have him become fearlessly familiar with all wagons and machines about which he will work.

In breaking older colts I use the same method. It is neces-

sary to study each animal, giving due consideration to the temperament and habits of the strain to which he belongs, particularly of his dam and sire, so as to guard against inherited faults. This method, followed with intelligence and patience, will usually produce satisfactory results.

With few exceptions, bad horses are made bad by the methods used in breaking them. Usually such horses can be traced to men who will not make a study of each animal and modify methods to fit cases. Horses are like children. We must win their confidence to such a degree that they fear nothing when we are with them.

dence to such a degree that they fear nothing when we are with them.

If a person permits a colt to grow up unmanageable and to develop bad traits he is not a horseman, and no amount of hints on handling horses will make one of him. It will be safer for him to turn the bad animal over to a real horseman, not a loud-voiced brag, as horsemen, like musicians, are born, not made.

The time to begin training a colt is before he is weaned. He should be handled some every day

Feeding Work Horses

By ANDREW M. PATERSON

HE food consumed by the horse is taken into the mouth and, by the aid of the lips, tongue and cheeks, is passed back to the molar teeth, where it is ground. As grinding or mastication is taking place, the food is mixed with saliva and formed into balls for swallowing. After the food is masticated it is forced into the gullet and on into the stomach and intestines, where it is digested and used to perform labor.

No matter what kind of feed the horse receives, if he is not so fed and managed that the teeth and digestive organs are kept in the best condition, he will be unable to do a maximum amount of labor.

The horse's stomach and small intestines are so The horse's stomach and small intestines are so small that they cannot take care of the large amount of slowly digestible feeds that are generally fed. However, they are provided with the large intestines, which hold about five times as much as the stomach. The average capacity of the horse's stomach is about 16 quarts, small intestines 68 quarts, and the large intestines 136 quarts.

The amount of feed to give the horse daily should be governed by the condition of the horse, the feed on hand, and the kind of work he is doing. When a horse is doing hard work, the ration should consist of a larger amount of concentrates than when he is doing light work. Two pounds of grain feed to each one hundred pounds of horse is a good rule to follow. This could best be decided by careful observation by the groom.

To Produce Horse Labor Cheaply

IF MORE attention were paid to feeding the work horses, horse labor could be produced more economically, at the same time the physican condition of the horse would be much better. Regularity of feeding is of as much importance as the feed itself. Horses should be fed as near the same time each day as possible. By so doing the horse will relish his food, live longer, and do his work a great deal more

Horses do better on some feed than on others.

However, these feeds are not always available, due to underproduction and high prices. However, a good horseman by proper feeding will get the most out of the feed on hand.

the feed on hand.

A mistake a great many horsemen make is having feed before the horses at all times. When such conditions prevail the horse will go to work with an overloaded stomach, which causes him to be "loggy" and uncomfortable. About two thirds of the day's rations should be fed in the evening, and one third at the other two meals. By feeding a large portion of the ration at night, the horse has ample time to masticate and digest his food properly.

Watering is as essential as the food itself, and should always be given the horses before grain is fed. By so doing, the horse will relish his feed and digest it more easily.

The horse's grain ration should be ma-

the horse will relish his feed and digest it more easily.

The horse's grain ration should be materially cut down when he is idle, as he does not need as much feed as when at work. To heavily feed idle horses is a dangerous practice. A bran mash once a week is good to keep the horse in the best possible condition. Oats is considered the best grain for horses, but due to the high price of this feed, corn, barley, and bran, with oil meal, have taken its place. Oats is fed, to a large extent, in the Northern and Eastern sections of the United States, corn in the Southern, and barley in the Western States. Alfalfa, clover, timothy, and prairie hay are most commonly used as roughage.

When well-cured alfalfa is fed as a concentrate, and if cut when fairly well matured and fed in proper amounts, it is a very valuable food. The same is true of clover. Less than one pound daily to each one hundred pounds of horse is plenty. When horses have all the alfalfa they will eat, it is liable to make them soft, and cause them to urinate very often, which is harmful.

harmful.

Timothy and prairie hay have a larger amount of fiber, and should be fed in larger amounts of given bulk, one to one and one-fourth pounds daily to each one hundred pounds of horse is sufficient. Small grain hays have proved a very good roughage for horses. Corn fodder and oat straw are an excellent roughage for idle horses. Turnips and carrots will prove valuable in the ration.

In a recent test conducted at Fort Riley, Kansas, which was planned by Roland J. Kinzer, former professor of Amimal Husbandry at the Kansas State Agricultural College, and conducted by Dr. C. W. McCampbell of the same institution, to determine the best rations for work horses, many

rations for work horses, many interesting things were learned.

In this experiment when prairie and timothy hay were fed, oats proved to be better than corn, corn and oats were better than corn alone. When corn was fed with the proper amount and quality of alfalfa hay, it gave as good results as oats and prairie hay, and was one third cheaper. Barley has the same feeding value as oats, but due to the cost is impractical in some localities.

When alfalfa hay was "properly fed" it was more valuable as a roughage than timothy or prairie, and reduced the cost of the ration about 25 per cent.

Here are some rations for horses at hard work that have given good results:

Corn . . . 6 fb Corn . . . 6 fb Bran . . . 3 Oats . . . 4 Oil meal . 1 Bran . . 2 Prairie Timothy

3 4
Oats 2 lb Oats 12 lb
Corn 8 Prairie
Alfalfa hay ... 14 EW



Better results are obtained if the mules and horses doing hard work are fed a larger amount of concentrates than when doing lighter work

Do you believe there is wizardry in the care, management, and training of horses? This article tears the mask off

Some Horse Troubles

The Treatments to Use for Heaves, Shying, and Colic

By DAVID BUFFUM

Horses that have collars as small as they can wear comfortably don't have sore shoulders

HEN I was a young man and had just started in farming, I wanted some cows. I was referred to a Mr. Hardhack, a neighbor of ours. He stung me good and plenty. Of five very good-looking cows that I bought of him one was a "three-teater," one hadn't a tooth in her old head, and one was a confirmed kicker at the milk pail, besides jumping out of every pasture she was turned into. The remaining two had no unsoundnesses or vices but were genuine bovine frauds, with great, handsome udders that looked as if they might have about a bushel of milk in them, but proved to be composed mainly of flesh.

Some weeks later, happening to meet Mr. Hard-

composed mainly of flesh.

Some weeks later, happening to meet Mr. Hardhack on the road, he stopped me and inquired with solicitude how the animals turned out. I briefly narrated their idiosyncrasies. "Too bad, too bad," said he sympathetically. "You see, I'd only jest fetched 'em from Brighton an' I hadn't had 'em long enough to find out their 'outs.' It's a good plan fer a young farmer to look a critter over pretty careful before he decides to buy." A piece of excellent advice, which I've endeavored to follow ever since.

Of course, I was too game to ask him to make the

which I've endeavored to follow ever since.

Of course, I was too game to ask him to make the trade right, but as I looked at him, I was seized with a deep, unspeakable longing to trade horses with him, and, noting the miserable animal he was driving, I asked him if he didn't think he'd better have a new one. But he said no; the critter he had wasn't handsome but served her purpose pretty

her purpose pretty well.

her purpose pretty well.

Some years later there came to me in a trade two big, handsome mares that had the heaves. I did not want them, but consoled myself with the reflection that they cost me practically nothing. Now, before going further with my story I am going to tell you how I feed a heavey horse. First, I feed a suitable ration of grain three times a day. Then, for forage, no hay at all, but sweet, well-cured corn fodder, run through a cutting machine. I give the principal meal of this for supper. Then, for breakfast, I feed a rather light meal, just enough to properly distend the horse's stomach, and at noon feed no forage at all, depending wholly on the grain ration. Fed in this way a heavey horse is always greatly benefited and in many cases ceases altogether to show his ailment.

In the late spring, when the corn fodder becomes woody, I feed green forage, cut fresh and carried into the stable, in the same way.

Under such feeding the horses referred to were soon, to all appearances, sound horses. Then, as if

Under such feeding the horses referred to were soon, to all appearances, sound horses. Then, as if Fate had timed the event to a nicety, I heard that Mr. Hardhack was in need of a new team. I hitched up my heavey mares, drove to Mr. Hardhack's, and offered him the equine treasures for \$200.

He looked the mares over carefully, after the manner he had recommended. "Looks a pretty fairish team of hosses," said he. "Any outs?"

"Yes, one—the heaves."

Silence, and another long lingering evamination

Silence, and another long, lingering examination. Then an expression of deep cunning overspread his countenance. "Ever had a hoss with blind staggers?"

I told him I had. "Well, give me a written guarantee that they're free from 'em or money refunded, and I'll take 'em—that is, at \$160," he added quickly.

Accept His Offer for the Mares

ROSE to his offer with a promptness that took his breath away and wrote the guarantee. He was worried and greatly puzzled, for he felt sure the mares had some hidden "out."

Just three days later he drove into my yard with the mares wheezing and puffing to the full limit of their malady. "Heaves show a trifle this morning, don't they?" said I.

"A trifle! Well, you might call it so, I guess. Why, I've ben afraid they'd heave themselves plumb

inside out, and I've ben skairt stiff fer fear it might happen on the public road. An' now I want to swap you these old walkin' bellowses fer good sound hosses."

I declined to "swap" but did sell him two sound

young horses for an excellent price. Then I told him the right way to feed a horse with the heaves. Let us take the case of the nervous shyer—the horse that, after a few days of idleness, shies violently at objects that cause him no fear when he is driven every day. Oats form the principal grain diet of most driving horses. Now, oats contain a higher percentage of phosphorus than other grains, and phosphorus specially nourishes and stimulates the nervous system. When the horse is doing hard road work this is just what we want. But if standing idle much, especially if of a nervous and excitable temperament, oats in any considerable quantity overstimulate the nerves. This gives the animal an excess of nervous energy that he has no means of working off, and that upsets his mental balance. Hence, the uncontrollable shying.

Now corn is a "fat and lazy" food, containing much less phosphorus than oats and much more fattening elements. So, if the nervous horse that is insuffi-

elements. So, if the nervous horse that is insufficiently used be given a proper ration of corn instead of oats he will behave better, be pleasanter to drive, and also take much more comfort himself.

I once bought a mare of an exceedingly nervous temperament. She was a shyer and so fretful and uneasy generally that her former owner freely confessed that he had never taken any comfort with her. I was unable to use her nearly as much as her case required, and yet, after I had owned her a few weeks, the headeness of much evictors as much as here are sent as the headeness of much evictors as much much evictors. she became so much quieter, so much more sane and sensible in every way, that my neighbors, to whom she was well known, were so surprised that they were curious to know what strange magic had wrought the change. And when I told them that it was mainly owing to reducing her rations to a proper

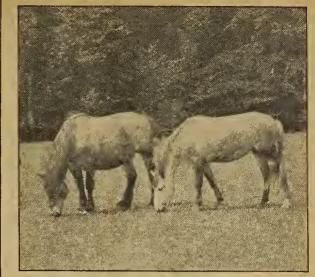
hen I told them that it her rations to a proper quantity and substituting corn and bran for oats they were incredulous that so simple a thing could work the change.

Of course, proper driving—driving so as to soothe instead of irritate—did have a great deal to do with it. But proper driving while the horse's nerves are constantly irritated by improper feeding cannot in itself accomplish the desired result. A good horse man should study all aspects of the case in hand and turn all the aids he can command to account. count.

A majority of the horse troubles with which the farmer is confronted can be remedied very simply if sufficient study of each case is given to discover the cause—which, as a rule, can

which, as a rule, can be easily removed. The difficulty is that, owing to more absorbing interests or some other reason, the study is not made, and small troubles become big ones. Think of the hundreds and thousands of horses that suffer from galled and sore shoulders, and then think that all this suffering could be avoided. How?

Nineteen horses out of every twenty—possibly a greater number—are habitually used in collars that are too large for them. Of course, a collar may be too small—though it had much better be too small than too large—but it should fit snugly. Insert three fingers between the bottom of the inside of the collar and the neck, and if the latter presses upon them slightly but not too hard the collar is right. In fitting



Some years later I got two big mares in a trade that had the heaves

a new collar some allowance must also be made for its flattening out and becoming larger as it becomes

fitted to the shoulder. Bathing the shoulders with cold water when the harness is taken off, especially if the horse be young and not yet hardened into working shape, is a mighty

But the one thing that is more important than all other things is to have the collar fit properly, which generally simply means to have it as small as the horse can wear it comfortably. If you always take pains in this respect you will have very little trouble from sore shoulders.

I recommend the feeding of molasses to horses that are run down and out of condition. I fed it, many years ago, in liquid form, mixed with corn meal and bran; and for building up a run-down horse I know of no feed that is its equal. Of course, it must be used with judgment, like all other feeds. It can now be had in the market already mixed, which makes it much pleasanter to handle.

Speaking of nature—an old lady whose horse had had several attacks of what she called "wind colic" once said to me that she believed "'twas natural for horses to have colic."

Whisky Doesn't Cure Colic

IN MANY cases of colic where my help has been sought I have found the poor animal being dosed with whisky, which is one of the worst things that could be given him, for colic is caused by fermentation and gases in the stomach, and whisky not only does not relieve this condition but tends to make it

tion and gases in the stomach, and whisky not only does not relieve this condition but tends to make it worse.

Now, the first thing to do is to relieve the acidity and fermentation, and this is best done by giving common saleratus (bicarbonate of soda) in water, a remedy that is at hand in nearly every farmhouse. Give him a teacupful of it in water, and in fifteen or twenty minutes repeat the dose if necessary. This, without any other treatment, will give relief in many cases, perhaps the majority of them. But if further treatment is needed, give an injection of a pail of warm soapy water. All that is necessary is three or four feet of common rubber pipe with a funnel fitted to one end. Insert the plain end about a foot into the rectum, elevate the funnel, and pour in the water. It will flow in by its own weight.

Should all this fail to bring relief—there is now and then a case that is very obstinate—use the following prescription: One part aromatic spirits of ammonia mixed with two parts spirits of chloroform. Give the horse about half a teacupful of this mixture in a pint of warm—not hot—water. Repeat every fifteen minutes until relieved. It rarely fails.

We often hear it said that such or such a man is "a perfect wizard with horses." But there is no wizardry in the care, management, or training of horses; it is simply an intelligent grasp of the subject, applied in a practical way.



Of five good-looking cows I bought, one was a "three-teater," one hadn't any teeth, one was a bad kicker, and the other two had great, handsome udders but gave little milk



Huge Sums Spent to Make Your Tires Cost Less

You probably would be none the wiser-until the tires were worn out-if we should make the Goodyear All-Weather Tread only ordinarily thick.

But we make it double-thick, so that you get extra wear and extra mileage—thereby adding a million and a half dollars to our production costs this year.

If we should abandon the Goodyear On-Air Cure and go back to the old method of vulcanizing, we could save almost \$600,000 this year.

But your risk of blow-outs from wrinkled or buckled fabric - which you can't see - would be greatly in-

The big blocks in the larger sizes of All-Weather No-Hook Tires give greater traction and longer life. They use more material. So does the increased size of the tires. The two total more than \$400,000 for 1916.

Cord Tires are improved, at added cost. Tubes are made thicker, at added cost.

The extra material required for Goodyear Tires and Tubes this year totals close to three millions and a half.

The additional labor is well over \$600,000 and the special equipment required for special Goodyear processes costs more than \$150,000.

Why, you ask, should The Goodyear Tire & Rubber Company put these extra millions into Goodyear

So that you may have tires better than the average.

So that you may enjoy complete tire satisfaction.

So that you will always use Goodyear Tires, after you have found that they do go farther and cost less.

So that Goodyears will continue to be the preferred tires, among close to 200 brands, with those who reckon tire cost not on price but on service and mileage.

The Goodyear Tire & Rubber Company Akron, Ohio

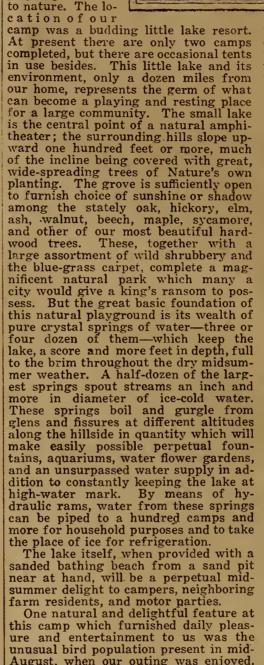


The Editor's Letter

Let's Boost for Community Play Centers



R or tire week my wife and I have enjoyed a play "spell" close to nature. The lo-

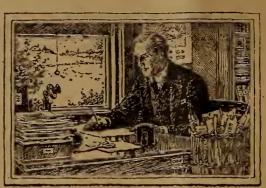


ure and entertainment to us was the unusual bird population present in mid-August, when our outing was enjoyed. At this season the nesting activity of birds is practically over. Yet during our stay, thirty distinct varieties of birds were observed. (Not an English sparrow was among them.) It was an everyday entertainment to see dozens of sparrow was among them.) It was an everyday entertailment to see dozens of these birds bathing and splashing in the refreshing streams that coursed from the springs. Sometimes a half-dozen different bird varieties could be seen bathing harmoniously in community groups where the water was particularly fine. As we rected under the ticularly fine. As we rested under the canopy of trees drinking in the beautiful landscape enlivened by God's bird and animal life, the future of this yet folded before our eyes. Here is opportunity to develop a recreation spot at comparatively slight cost for the benefit of country and town residents alike. And the time to preserve and develop these natural playgrounds is the present, before they come under the control of those who would make them merely money-making enterprises.

ALL over our broad country there are hundreds and thousands of similar natural opportunities which only need development to afford pleasure, renewed health, and courage to the communities surrounding them. Not the least reason for developing these playgrounds is to

for developing these playgrounds is to furnish congenial camping grounds for picnics, farmers' meetings, chautauquas, baseball grounds, and for all kinds of suitable sports that appeal to the young people of the farms and towns.

With our present rapid means of transportation, these playgrounds and breathing places, furnished by Nature and developed by man, can serve their purpose for a much larger area of country than in the past. I see these natural opportunities frequently as I go from opportunities frequently as I go from State to State. But most of them remain undeveloped simply because this phase of community betterment has not yet been given the attention it deserves.





Life must not be allowed to become a treadmill for farmers' sons, daughters, or their parents. An occasional day or week, once a year, spent picnicking or camping in a lakeside or riverside park will furnish new courage and vigor which later makes for greater efficiency when the routine of work is resumed.

ROM my observation, I believe the main influence which now brings farmers out to club, fruit, and stock association meetings is to get new ideas, more than to hear set speeches and lectures some of which unfortunately are found to be dough-baked. Of course, we all are eager to see a new machine or implement go through its paces. So the demonstration adjunct to farmers' gatherings will continue to be a winning attraction.

The farmer to-day is not content to sit and listen to prosy accounts of what experimental workers are trying to sit and listen to prosy accounts of what experimental workers are trying to do; but when one of these experimental chaps steps forward and modestly says, "I have a new and effectual remedy with which to control a certain damaging pest or plant disease and can take you to a number of farms where I have abundant proof," he gets instant attention. The same special appeal holds good in subjects which discuss the growing and marketing of produce.

Our county fairs are passing through much the same transformation as the old-fashioned farm meetings have. The old time-worn practice at some county fairs of a few persons exhibiting full lines of cereals from year to year, and only changing the date tag, has about run its race. Under such practice a mere handful of exhibitors won all of the prizes as a result of their questionable preparedness.

I therefore believe it about time to pass up the more or less unpopular county fair with its old-fashioned redtape proceedings which run through three or four days, and in its place have an enthusiastic community field-day harvest event. This could well include 50 to 150 square miles of area, disregarding town, county, and state lines entirely. Let the main industries of the

garding town, county, and state lines entirely. Let the main industries of the entirely. Let the main industries of the particular region determine the bounds of the community area and its borders, should a limit to the size of the gathering be required. These annual harvest events could and should continue stock, fruit, produce, and flour show features on a basis of honor awards rather than cash premiums. But a generous share of the day should be given to unadulterated fun. The various neighborhoods of the community could build up teams to engage in athletic contests for both boys, girls, and young people generally. Keen friendly rivalry under a challenge acceptance basis, so that proper honors could be won and held only by the continuation of skill in winning and holding such honors, would draw thousands to enjoy the conflicts. the conflicts.

I have had the honor of being present and enjoying several community harvest events which now take the place of county fairs, and those coming under my eye went through with a dash, zest, and hilarity that was most refreshing One such event was most successfully pulled off in Lawrence County, Indiana, in July. Close to 3,000 people were present, and the verdict from all sides at the close was, "Now let us begin to plan for another along similar lines next year." This particular event included portions of two counties, with farmers and other lines of business well represented on a true community basis.

The briefest kind of platform exercises preceded the picnic dinner; then came several hours of friendly rivalry in athletics and other lines of contests. The county agent of Orange County, Indiana, was an active force in developing this field day.

I for one believe there is a big future for more of this type of community field events where now there is little to break the oppressiveness of the summer's One such event was most successfully

the oppressiveness of the summer' heavy toil. What do you think about it?

The Editor

When Wagons Wear Out

A Few Points to Bear in Mind in Selecting a New One

By CARLTON FISHER



Wagons at market, no two alike. How much thought is really given to a farm wagon?

HE farm papers have hurt the wagon business," an experienced wagon manufacturer said the other day, and he meant it. "I can well remember the day," he continued, "when we would sell a farmer a wagon every seven or eight years. But now every time he picks up a farm paper he reads about the importance of keeping

farm paper he reads about the importance of keeping equipment under cover and how to make a wagon shed and ways to take care of the wheels. A good many follow such advice, and consequently wagons now last a generation—maybe more, who knows?"

But there is another side to consider. On a certain large Illinois farm managed by a practical man who incidentally is a graduate of an agricultural college, I noticed several wagons with the bottoms of the boxes nearly rotted out. "Theoretically," said the manager, "we ought to keep those wagons in a shed when we're not using them. But practically we're using them most of the time and our time is too valuable to keep putting them into a shed and taking them out. The bottoms of the wagon bed are the only parts that wear out very fast, and we plan on replacing them about every three years. These wagons are for rough work and they get it, believe me."

Saves Time Going Through Gates

THE wagonmaker was partly right. Farm wagons do last longer than they used to because our roads are better, if for no other reason. Anyhow, that manufacturer finds it more profitabe to make trucks for the belligerent nations in Europe than wagons for the American farmer. One army truck is made entirely of steel except for the hickory spokes and hard rubber tires. It has a capacity of five tons, and a coupling on each end like a freight car. The axles are massive and the frame is heavily braced and riveted. In times of peace such a truck, with new tires occasionally, would last perhaps a hundred years, but in the war zone they may last less than as many

less than as many days. This manufacturer has or-ders for months ahead. Neverthe-less, farm wagons do wear out some time even on good roads and with the best care, and certain improvements are -well worth considering when getting a

new one. On a farm in Missouri the nature of the crops and live stock raised required a great many getes great many gates, which had to be continually opened and closed. At first this farmer had nothing but high - wheeled wagons, which caused the drivers to lose considerable time in get-ting into and out of the wagons when passing through the gates.

Finally, as an experiment, he bought a low-wheeled wagon.
When it had a

hay-rack bed on it the driver's feet nearly touched the ground, it was so low. Naturally it saved time in going through the gates, and as the wagon was low it carried a bigger load than a high wagon without danger of spilling some of it when going over sidling places. I have seen 52 shocks of flax piled on that wagon and safely delivered to the stack. But, on the other hand, low wagons have the drawback of being hard to pitch from when stacks are built high. difference of a foot or eighteen inches in height makes lots of difference when you are pitching off the last of a load to top off a stack on a hot day.

Neck Yoke Can't Slip Off

THIS wagon had steel wheels, sturdy axles, and was fitted with a 16-foot rack. It was always dependable. Metal wheels have the advantage of withstanding hot weather somewhat better than wooden wheels, but there are disadvantages. Metal wheels with flat tires in which the ends of the spokes come through are likely to wear down, and the spokes may get loose. This has suggested the popular style of metal wheels in which the center of the tread is raised. The result is to protect the ends of the spokes and the raised center also gives the wheels a better grip on soft roads.

Among the most important improvements in the running gear of farm wagons is the development of sand-proof skeins. A cup-shaped depression on the hub fits over a flange on the skein. This makes it almost impossible for sand and dirt to enter, but as an extra precaution the skein is provided with a

an extra precaution the skein is provided with a groove that leads to an opening at the bottom where any grit that enters drops out.

The "safety first" movement has brought about the wagon tongue with safety nipple, which is a slight projection on the under side of the tongue near the end. It prevents the neck yoke from slipping off the tongue. While such an occurrence is rare, it sometimes happens when the tugs are too long, or for any other reason, the for any other reason, the horses work too near the end of the tongue. Some careful drivers whose wagons are not equipped with a safety-nipple tongue drill a three-quarter-inch hole through the end of the tongue and drop in a bolt about four inches long, threads down. A nut is then put on this bolt and the threads are hammered so

threads are hammered so
the nut cannot work
loose and drop off. To
put the neck-yoke ring over the tongue, you pull up
the bolt and then let it drop down again.

Hickory and white oak are the principal woods
used in the construction of high-grade farm wagons.

"What's under the paint?" is a common question
asked by particular buyers.

A complete set of specifications should briefly state
the materials used for wheels, axles, gear, box,

tongue, and also the number of coats of paint or varnish. Some specifications which are complete in trifling details, worded in a convincing way, will

dodge other points which are important.

Several years ago I was considering a wagon built according to vague specifications like these. With regard to the finish the specifications stated that it was painted "with sufficient coats to make a first-class job." The wood for certain important parts was specified as "oak," but the kind of oak was not given. This was only a moderate-priced wagon and I did not expect the very best quality throughout. But finally I decided in favor of a wagon a little higher priced, largely because it had a good reputation in my locality and because the specifications didn't dodge.

In wagon boxes there is a wide selection. A removable dumping box can now be had to fit a farm gear measuring 38 or 42 inches between the bolsters.

Wagon hardware, such as hay-rack clamps, water tanks to fit on wagon gear, and metal wheels to fit

any axles, may now be purchased separately.

So when one part of a wagon wears out, or if you change your method of farming, you can remodel the old wagon gear to give it a new lease on life.

EDITOR'S NOTE: Questions on farm wagons or special wagons for any purpose will be answered by personal let-Address the Machinery Editor, FARM AND FIRESIDE, Springfield, Ohio.

Just About Harness

By JOHN COLEMAN

VETERAN farmer remarked, "I buy harness for my horses in about the same way that I buy well, and give service." They must fit well, look well, and give service." Which is about as good harness wisdom as you will find anywhere.

Flashy harness with bright metal ornaments are seldom seen on wellare seldom seen on well-managed farms, because they are hard to keep clean and are also heavy. A farmer who bought such a set of harness for a fine team of mules soon regretted his purchase. "At first I thought they looked fine," he said, "but the more I look at those brass trimmings the less the more I look at those brass trimmings the less faith I have in my judgment. It's almost a crime to make these mules carry the extra weight in the hot summer months."

A harness having such unnecessary weight is also hard to handle, and is more expensive than a simple harness of equal

is more expensive than a simple harness of equal strength and quality. Here are a few practical helps for keeping harness in good condition and adding to its service:

Keep the stables well cleaned out, since the ammonia gases rising from manure are injurious to leather.

Reep harness used only at rare times in a closet or other protected place. Harness in daily use should be kept in a place as free from dust or dampness as possible.

When harness is removed from a horse, wipe it off. This is especially important if the harness is sweaty. Sweat injures the leather.

Remove the sweat and dirt with a damp sponge; then wipe dry with a cloth or, if it is a fine harness, with a chamois. Keep harness used only

with a chamois.
If you have been out in a rain, do not hang the wet harness up, as it will become hard and brittle. Rub with warm soapsuds, and then oil the harness.

Neatsfoot oil is good for harness, and should there be any tendency toward a reddish color as a result of washing, the original black may be restored by adding a little lampblack and kerosene to the

Finally, protect the harness by keeping it in good repair. A harness-repair outfit may be purchased for a few dollars, including stitch-ing awl, rivet set, rivets, pliers, and clamp for holding leather. A repair made in time may avert an accident, or prevent a broken harness during a busy season.



A reputation for strong wagons has brought American firms orders for war trucks



A high-wheeled wagon is easy to pitch from. But read in the article how a Missouri farmer found a low wagon with metal wheels especially useful and time-saving for certain kinds of work

FARM FIRESIDE

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October 7, 1916

Gives Son Part of Profits

NE clear-thinking, observant Missouri farmer has adopted the plan of contracting with his son to receive 25 per cent of the net profits of the farm for his work. This contract has now been in operation for four years, and no year has the son failed to receive more than a hired hand's wages, besides getting his living, the use of a team and buggy, and a more enjoyable life generally than he would expect should he seek employment elsewhere.

How much better such an arrangement is than paying the boy straight wages, or than forcing him to go off on someone else's farm to find his opportunity. By this method he is stimulated to put his best thought and effort into making the farm produce heavily and, what's more, he has the dignity and responsibility of a partner in the busi-

A Lesson in Marketing

APTAIN W. S. A. SMITH, who has been named a member of the Farm Loan Bank Board, was recently consulted by a farmer friend who had harvested a huge crop of hay.

"I've about 120 tons of this splendid clover hay," said the farmer, "but everybody else has so much that it's only going to be worth about half what we commonly get. I've also on hand the straw from 90 acres of wheat, likewise worth so little that I can't afford to bale and haul it. There'll be 120 tons of silage, and I've 55 acres of corn. The corn will chiefly be fed out; there's nothing in sight to turn into real money except the wheat. What'll I do?"

Captain Smith is a farmer who farms with his brains. He walked about the farmer's place a while before answer-

"This is your year to buy, instead of selling," he replied.

"Buy what?"

"More hay, corn, forage; even straw, maybe. Build another silo right away, and fill it with some of this corn."

be worth selling. What do you mean?"

"I mean that when your stuff isn't worth enough to sell, that's your time to buy. You get 22 cents a gallon for the milk you ship, don't you?"

cents for the other four."

"And you are milking about 26 cows?" my wheat that will make me any money this year."

Buy as many more cows as you already have, and turn all this stuff into milk and manure. The wheat straw will be worth more in milk and manure, twice over, than you can get for it otherwise. You have one of the best milk markets in the country. Borrow money to buy the cows, if necessary; you can make milk cheaper this coming year than ever before at any such price as it's now the additional cows, with very little rearranging. Make a couple of payments discover how the schools can be bettered.

on the note with which you get money to buy them, and after you've used them to convert your stuff into milk you will probably decide to finish paying off that note and keep the cows. If not, you can then sell the cows for all they'll cost you now, after using them to convert this cheap food into high-priced milk, and pay off the rest of the note with the proceeds."

The man sat down, figured it out carefully, borrowed the money, and went off to hunt for more cows.

"The money in farming," explained Captain Smith in conclusion of his lecture, "is in having the thing to sell that's high, and not selling when it's

That little lecture is a sample of the sort of doctrine Captain Smith has been disseminating, and that won for him the recognition as the right man to be the farm-practice expert on the Farm Loan Bank Board.

Simplify Railroad Problem

VER since the first railroads were L built, the problem of their relations to the public and to Government has been at the front. Some countries have solved it by government ownership, but about half the railroads in the world are still in private hands. The United States and Great Britain are the two big countries that have stood out firmly against government ownership; yet the exigencies of the present war have forced even Britain to take over the railroads temporarily, and it is very doubtful if they will ever be returned to private management.

Government regulation of railroads has been especially difficult in this country because of the division of authority over commerce between the States and the National Government. About every State has a railroad commission with power over transportation entirely within the State, but no power whatever over interstate movements. So we have a federal and forty-eight state commissions, and a jumble of authorities, jurisdictions, and powers.

One of the political parties has this year written into its platform a declaration favoring a single federal control over both interstate and intrastate commerce. It would abolish the state commissions, create a single authority, unify the whole scheme of regulation, and both simplify and cheapen regulation. No party has opposed the plan, and it is declared that the authorized spokesmen of all the important parties will pronounce in favor of this plan. It ought to be adopted. Railroad men, financiers, business men, shippersabout everybody except a few lawyers expert in the complicated problems of regulation favors the reform.

How to Better the Schools

THIS is the season when the schools "But I've got more now than I can I are opening. It is the time when use, and it isn't hardly worth enough to parents should inquire whether their children are getting all they ought out of the schools, and whether they, the parents, are doing as much as they should to supplement the school work.

The time has come when it is possible "Yes; 22 cents for eight months; 18 for the country to bring its schools up to the town standard. It can only be done if taxpayers and parents will dare "Yes; they're the only thing besides to try innovations. If the school in your district is the same sort of school that it was twenty years ago, your district "Precisely. Then build another silo, is not keeping up. If you don't believe keep your forage, don't bale any straw. it, look around. The county, state, and national authorities in schools are willing and anxious to help you. If you have a vague notion that something is wrong, but lack detailed information and confidence, the county superintendent will set you on the track of the state and national officials who will make you an authority in your community. There is no greater need in the ments are generally served and a special rural communities of this country than worth. You have the plant to handle to have two or three earnest, serious people in each school district trying to

Cheaper Land Clearing

TORTHERN Wisconsin has thousands of acres of fertile cut-over land. But the expense of clearing it with either dynamite or stump pullers has been a heavy burden to settlers of limited means. So the University of Wisconsin reasoned, "Why not use both methods in combination?"

To test the plan it organized a demonstration crew and induced stump puller and dynamite manufacturers to join. Two of the railroads furnished trains, and the demonstrations were held. At the end of the trip the stumppuller folks admitted that time, labor, and money were saved by first loosening the stumps by blasting before pulling them. Likewise, the dynamite people were able to see more good in stump pullers than they had ever before dared

Settlers learned among other things that a 20 per cent dynamite would under certain conditions do as much work as a 40 per cent strength they had formerly used, and by suiting the time of blasting to the condition of the soil they could save a large portion of their blasting bill.

Everybody learned something from everyone else. Though the demonstrations were conducted by the university, they were surprisingly free from academic instruction. It was simply a case of mixing together the practical experience of experts in different lines for the benefit of struggling settlers and for the ultimate good of the State.

Disease Toll One Fifth

RECENT investigations in Pennsylvania show that there is a loss of about one fifth of the total potato crop produced in the Keystone State caused by preventable potato diseases. This means an annual loss of about three million dollars on the potato crop alone in one State. Pennsylvania stands sixth among the States in the production of potatoes in this country. One bushel lost in five out of the potato crop of the State is too large a toll to be taken by preventable potato diseases.

Our Letter Box

New Settlers' Clubs

DEAR EDITOR: Two new farmers' clubs have recently been formed in Marinette County, Wisconsin, and read-ers of your paper may be interested in some of the details in reference to their organization and work.

The first one was formed at Pembine, and possibly will be affiliated with some general farmers' organization as the Farmers' Union or the Grange. The purpose of this organization is to bring about better social conditions for the members and also to help in developing the community and the farms in that locality. The membership is made up entirely of new settlers.

The other new farmers' club in the county is known as the Lake Nocquebay Wide-Awake Club. It was recently formed at a meeting in the rural school of the settlement. Like the Pembine club, the members are all new settlers. Co-operation among the members of the club, and also with all organizations working for the advancement of farming in the county, is the purpose of the organization. Efforts to make farming more profitable through standarding zation of seed, general improvement of farm methods and better live-stock farming, and improved social conditions were some of the objects set forth.

The settlement of Cedarville in this county also has a farmers' club, although its organization has never been formal. In some respects this informality has been one of the strongest features of the Cedarville club. One evening every week the entire settle-ment, including all the men, women, and children, gather at the schoolhouse and discuss the progress of the settlement and better farming methods, and end with a general hour of sociability.

Some wholesome but light refreshprogram is arranged, providing for a debate or some other interesting fea-

I think that this plan at Cedarville has had a lot to do with making Cedar-

ville probably the best new settlement in upper Wisconsin. Three years ago there was not even one house in Cedar-ville. To-day the little place has a station on the main line of the Milwaukee railroad, a post-office, a good school-house, and a produce warenouse. The settlement now numbers about fifty families. It is just another example of what real community spirit can do when expressed through a farmers' club.

His Best Fence

R. L. THOMPSON, Wisconsin.

DEAR EDITOR: I have constructed wire fences of all kinds, beginning with the old wire and slat fences and coming down to date. Of late years I have found what is almost perfection. It is one having a perfectly woven-wire web fastened to a good quality of posts, with the end and corner posts set to insure stability and long life.

The two most important things for a strong and permanent wire fence are to strong and permanent were sence are to have the fencing made of nothing smaller than No. 9 wire and the posts set deep and well braced. Red cedar and black locust posts have no superior among the common kinds of wood. Concrete and steel are also good. If the woven-wire web is made from all No. 9 wire the stays as well as the line wires wire, the stays as well as the line wires, and the posts made from the materials named, you have the basis for a good fence. Set and anchor the end posts so there is no pulling up or drawing from a perfectly perpendicular position. It pays to put up such a fence, for it will last and turn all kinds of stock for a long term of years. W. A. GRAHAM, Indiana.

Matched Lumber for Concrete Work

DEAR EDITOR: When making walls of concrete, use tongue-and-groove lumber for the forms. You will get a smoother wall, and if the concrete is rather slushy, as it should be, there will be less loss from concrete escaping from the

The correct proportions for walls is one bag of cement, two cubic feet of sand, four cubic feet of rocks or coarse gravel. Thrust a thin wooden paddle between the form and the fresh concrete to keep the stones back in the concrete. The thin mixture will then flow against the forms, giving you a smooth wall. HARRY ASHLEY, Kansas.

Good Taste in Painting

DEAR EDITOR: A painter of my acquaintance made an interesting remark

the other day:
"I don't care who builds a house or barn, but let me paint it and I'll make it look attractive.

He is a good painter and this remark is not an empty boast. In the painting of buildings certain colors and combinations are attractive and are known as safe colors. On the other hand, various other combinations are to be avoided. Here are a few of the color combinations which nearly always look well on

All white. Brown with white trimmings. White with brown trimmings. Brown with light brown trimmings. Dark green, white trimmings. White with dark green trimmings. Yellow with white trimmings. Gray with white trimmings. Light gray with dark gray trimmings.

A light cream or ivory color is preferable to white in some of the combinations mentioned, for the reason that the contrast is not quite so striking.

B. D. STOCKWELL, Ohio.

For Chapped Hands

DEAR EDITOR: I noticed Dr. Charles H. Lerrigo's chapped hands recipe. I have one that beats anything else ever tried. I have tried it for forty years, and my parents before me used it. is sorghum molasses (or any other kindof syrup will beat an oily substance, simply because it is easy to wash off). First, wash the hands clean, rinse them in clear water, shake some of the water off, then put one, two, or three drops of molasses (the amount depends on how windy and cold the day is) in the palm of each hand and rub all over the hands, and face too if it is chapped. Then let it dry. When you wash it, all comes off A. M. SMITH, Iowa. easily.

Test for Pure Sand

DEAR EDITOR: Sand that contains clay or loam will weaken concrete in which it is used. And if there is very much clay or loam present, the concrete will soon crumble and be worthless. A simple test for dirt in sand is to take a wide-mouthed jar holding at least a quart and fill it a third full of sand.

Then nearly fill with water and shake well. The sand will settle first and the dirt, if any, will form in a layer on top of the sand.

JAMES McDonald, Nebraska.

Three Autos to Given Away

Fair Play and Honest Treatment Guaranteed to All

Other Valuable **Prizes** Big Money First Grand Prize \$635 Overland, 5-Passenger, 31½ Horse Power, Electric Starting and Lighting. Too!

Farm and Fireside's Grand Prize Distribution

HIS is the opportunity you have been looking for. Just the very thing that you have dreamed of, to own an automobile all your own. This is the chance of your lifetime to win the big handsome Five-Passenger, 1917 Model Overland Touring Car, illustrated above, or one of the two Five-Pasenger, latest 1917 Model Ford Touring Cars; \$75.00 Victrola; \$50.00 Diamond Ring; \$50.00 Fur Coat (for either lady or gentleman), or a \$25.00 Gold Watch. It is a fair and square prize distribution and it is open to every reader of FARM AND FIRESIDE.

You don't have to invest one penny of your hard-earned money—it costs you absolutely nothing to win one of these grand prizes. And we're going to give money rewards too, so you see you can't possibly lose. We have given away thousands of dollars' worth of fine prizes in the past few months to our deserving friends, but this is the most liberal, the grandest prize distribution we have ever made. Get your share of these big rewards. Don't wait. Sign the coupon and send it in to-day, without fail. That's the thing that will give you a flying start. Mail the coupon now—quickly.

Find Out More

Perhaps when you see at the bottom of this advertisement the name of the great farm paper that is backing this plan you will think you can guess what it's all about. But you can't guess. Even the most vivid imagination won't help you guess the nature of this all-can-win prize distribution. Mail the coupon and get all the facts.

FARM AND FIRESIDE, as most of our readers know, has given away more than 300 Ponies to boys and girls who have done a little easy work for us in their spare time. As a result of our reputation as being unusually liberal in awarding valuable gifts, many of our subscribers and readers have asked us why we didn't give away automobiles so the "big folks" could get a chance. We have decided to grant their request and we are now giving the "grown-ups" as well as the children a remarkable opportunity to win one of the grand prizes in this wonderful all-can-win prize distribution, which starts at once. The quicker you mail the coupon the better start you will have.

Here is the List of **Grand Prizes**

1st Grand Prize-\$635.00 Overland Five-Passenger Touring Car, 1917 Model electric starting and lighting, head-light dimmers, left-hand drive, center control, magnetic speedometer, demountable rims, etc.

2d Grand Prize—Ford, Five-Passenger Touring Car, Latest 1917 Model, fully

3d Grand Prize—Ford, Five-Passenger Touring Car, Latest 1917 Model, fully equipped.

4th Grand Prize—\$75.00 Victrola. 5th Grand Prize—\$50.00 Diamond

6th Grand Prize-\$50.00 Fur Coat.

7th Grand Prize—\$25.00 Gold Watch. 8th Grand Prize—\$25.00 Gold Watch. 9th Grand Prize-\$25.00 Gold Watch. 10th Grand Prize-\$25.00 Gold

Farm & Fireside's Guarantee

We wish to guarantee to the readers of FARM AND FIRESIDE that this Prize Distribution will be conducted with the utmost fairness in every way and that the prizes will be awarded just as repre-FARM AND FIRESIDE.



Everyone is Handsomely Rewarded Nobody Disappointed

There's no chance for you to lose. You can't help winning, not with the help we are going to give you. And besides, your friends all come to your assistance. Winning one of these grand prizes is mere child's play. You don't need a particle of experience, the less you have the better.

You will actually be surprised, astonished and amazed at how very easily you can be the winner of one of these grand prizes. Don't think you haven't a chance to win, don't let anyone tell you that we do not give away valuable prizes. This great prize distribution is going to be conducted just as we say it will, with absolute fairness and honesty to all.



Turn Your Spare Time Into Cash and Valuable Prizes

Remember, it will not be necessary to spend any of your time that you devote to other things. Your spare time only is required. An occasional visit among your friends, neighbors and relatives will make you the owner of one of these three automobiles or one of the other prizes.

Did you ever hear of a more liberal or remarkable offer? Why, its going to be hard for you to keep from winning! Be careful—act quickly so that no one else in your neighborhood will get ahead of you. Sign and mail the coupon at once-to-day.

The "Auto" Contest Manager Farm and Fireside Springfield, Ohio

Now, Don't Delay

Surely you want one or the other of these big Grand Prizes-if you do, can you think of a quicker, surer way to get it than to sign and mail the coupon at once. Here's your chancea great, big chance to get your choice of these fine gifts without one cent of cost-and big money too.

There is nothing about the work that is disagreeable-nothing that you wouldn't ask a friend to do, nothing to invest in and nothing to be ashamed of. Just a little visiting around among your friends and neighbors is all you need to do. After you have signed and mailed the coupon and have heard from us you will wonder how it is possible to get such valuable gifts for such little effort.

Mail Coupon Quick

But don't you dare to put it off a minute! Dig for your pencil-fill out the coupon—clip it and mail it into us to-day-now-without a minute's delay. Just for doing that we will give you 5,000 Free Votes. The nice part about it is that 5,000 Votes may be all you need at the final wind-up to win big—Big—mind you, because we're going to give away three automobiles on such a liberal, all-can-win plan that you will see it is more like play than work. Before you turn this page sign and mail the coupon quickly and start off with a jump The "Auto" with 5,000 Free Votes to Contest your credit. Hurry-Manager; write to-day. This Cou-FARM AND FIRE-SIDE, Springfield, Ohio. pon Properly Filled Out Gives You a

Flying Start in
this Grand AllCan-Win

The Start in this Grand AllCan-Win

The Start in the Start in this Grand AllCan-Win

The Start in t Out Gives You a Prize Dis-Name tribution. Post Office



A Check on Engine Cost MANY people still seem to think that the less they pay for an engine the more they get the market ranging in price from about \$100.00 to \$250.00. Some men say, "6-H. P. is 6-H. P. If I can buy 6-H. P. for a hundred dollars, why should I pay more?" One reason is that the higher priced engine is actually the cheaper, that is, it gives more value for the money invested, because of its greater length of service. Take Titan engines for example. We can show any number of instances where Titan engines have done heavy work for twelve years and are still in everyday use. Does anyone who reads this know of a "cheap" engine that has lasted five years on any kind of work? Supposing the cheap engine lasted five years, how many such engines would a farmer have to buy to get twelve years' service? At least three, wouldn'the? Does a Titan engine cost three times as much as a cheap engine? Hardly. There is a real dollars and cents saving then in buying for their money. There are 6-H. P. farm engines on Hardly. There is a real dollars and cents saving then in buying a Titan engine, to say nothing of the priceless satisfaction of having an engine that is always there whenever you need its power. Think that over. We can make it easy for you to get the most value for your engine money. Write us at the address below. International Harvester Company of America (Incorporated) USA **CHICAGO** Champion Deering McCormick Milwaukee Osborne Plano

Firestone Tire and Rubber Co.

"America's Largest Exclusive Tire and Rim Makers"

Akron, O.-Branches and Dealers Everywhere

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Renewing Loans

Plan to Secure Use of Land Bank Funds

By JUDSON C. WELLIVER



Loan Bank Board started out on a trip around the country to tell farmers and other people what it was all about. It designed to spend six weeks listening to farmers and financiers, and talking back to them, in the effort to determine just how the new law ought to be set working and how it can do most good.

Before leaving on the trip a member of the board said to me:

"I wish you would say to the FARM AND FIRESIDE family that farmers who have loans falling due around January 1st should not count on getting loans through the new organization by that time. It is possible that some enterprising groups may have the preliminary organization of national farm loan associations ready before that; but these are not going to be able to get and lend money until the organization of the Farm Loan Board and the federal land banks is perfected, which will necessarily require considerable time.

"I should advise that a loan coming due before next July 1st be renewed on the best terms possible. Especially, there should be reserved the privilege of paying off the obligation at any annual or semiannual interest date. That will make it possible to take advantage of the new federal plan as soon as it is in working order. We think by next July it will be ready to put out money."

One must be impressed by the manner in which the new board has set about its business. The first thing agreed upon was that no politics would be permitted in the selection of appointees. Nobody gets a job through pull; he must be able to deliver the goods. The members of the board started working longer hours and harder than anybody in their employ. When I asked why they were so eager to overwork themselves. I got this

and harder than anybody in their employ. When I asked why they were so eager to overwork themselves, I got this

explanation:

"The cheaper we run this business the cheaper we will be able to furnish money to farmers. We've got to start money to farmers. We've got to start it right. If we pile up a lot of expenses the rate of interest will have to take care of them. We want to be able to lend money in every district cheaper than it can be had now. That will not be hard in some parts of the country, where rates are now altogether too high. It will be mighty hard in some sections where farmers are already getting money at 5 per cent flat.

"A great deal depends on the start-off. If our first issue of bonds is at 4½ per cent, it is pretty certain that before long we will be able to sell them as low as 4 per cent. We hope to start at a rate low enough to give confidence that our service will mean something substantial to farmers and we are confident that our rates will decrease and the margin for expenses be cut down after the outset."

THERE have been some very encouraging developments already. Insurance companies are immense investors in farm mortgages. Already some of these are issuing prospectuses of new plans under which they will lend money on mortgages with amortization clauses —that is, paying off an instalment of the principal at each interest payment. Some others are considering the discontinuance of their farm-loan departments entirely, it is said, with the idea that instead they will buy the bonds that the farm-loan banks will issue. If this shall ultimately be the decision of farm-loan investors, it will mean that the whole overhead cost of this business will be concentrated in the federal organization, and expenses greatly reduced. It is too early to guess how far this revolutionary tendency will go, but it is very certain that the new board aspires to accomplish just such a revolution, and believes, from information received, that there is an excellent chance to do it.

One of the most important results of this departure in farm finance is expected to be a pretty definite leveling up of farm-mortgage interest rates all over the country. There are tremendous variations now. In some sections money can be had at 5 per cent, no commissions; in others, to get it at 18 per

cent is doing well.

Theoretically, of course, the difference is caused by varying risk. If the

risk can be substantially eliminated, capital will buy one issue of bonds as cheaply as another. When they are all issued under the come rules are insurance come buy one issue of bonds as cheaply as another. When they are all issued under the same rules, an insurance company will order, not \$500,000 worth of Illinois 5 per cent farm mortgages, but \$500,000 of federal farm-loan mortgage bonds, and it will not need to care whether they are Illinois or Texas bonds, so it is certain they are issued under the new law's provisions. The new law will render its chief service to sections that now pay high interest rates. It will finally do away with much of the discrimination and inequity as between sections, and that will mean a big farming boom in some territories that have been backward.

For myself, I greatly doubt whether this evolution is going to help the communities where farm land is worth from \$100 to \$250 an acre. More likely it will bring cheaper lands into competition with these expensive ones, and tend to pull down the prices of the highest priced ones. But that will not be a serious affair. The country is growing so fast that lands are not going permanently to shrink in value anywhere.

**IN SIGNING the argicultural appro-

IN SIGNING the argicultural appropriation bill for this year, President Wilson wrote a letter to Congressman Lever, chairman of the House Committee on Agriculture, congratulating everybody on the character of the measure. There is no doubt it is a forward-looking will too. A good many things are being There is no doubt it is a forward-looking bill, too. A good many things are being started nowadays from which results will not be immediate, but will be highly important. Co-operation among farmers in various directions is being encouraged in the most effective way; namely, by hanging up prizes for the ones who co-operate. There is the road law which proposes co-operation with ones who co-operate. There is the road law, which proposes co-operation with the States in building country roads; the farm loan law, which provides co-operation with farmers, who must co-operate among themselves; and the activities of the Office of Markets, which will help in the detail of selling products to better advantage if only the farmers will do their share.

to better advantage if only the farmers will do their share.

Passage of the provision for federal standards, inspection, and grading of grains is going to be very important to farmers who will take advantage of it. It means that after this law is really in effect the farmer selling grain will be paid for what he really has. The better grades of grain, by getting the recognition they deserve, will mean more than ever before. Selecting the right kind of seed, the most desirable varieties, the ones best suited to your locality, will be very much worth while, because scientific grading will soon find out what varieties are best for various uses. There is a wide difference. Some kinds of wheat, for instance, stand sea travel much better than others. It is believed that the new law will before long lead to a very definite understand. long lead to a very definite understanding on these points, so that the man raising a grain especially adapted to export will get recognition for it, and be paid accordingly, something that has never been done before, except in the crudest way.

Still more important is the prospect that the seaboard grain markets will before long be "jacked up" to a proper relationship to the markets of the world. Some of them are persistently under that relationship, commonly by several cents. This year, for instance, with foreign demand largely making prices of grain, Liverpool has ordinarily more influence at Chicago than at some Eastern ports. There is something wrong when a big market on the Atlantic Coast pays less for No. 2 red winter wheat than Chicago does, yet that has been repeatedly noted. The Office of Markets, plus the activities of the grain standardization division, are likely to bring reform in this direction. Still more important is the prospect bring reform in this direction.

When grain prices went sky-shooting a few weeks ago, some people in and out of congress rushed forward with the demand that an embargo be forthwith placed on export of these particular

Some farmers have written asking if

Not a bit of it. People who don't stop to think are still pretty plentiful, and some of them in office. But that sort of thing is on the whole less popular than a few years ago. As I am writing, cash wheat in Chicago is a bit above \$1.50. An embargo—that is, a prohibition of exports—would considerably cut the price. It might even save the bakers from the necessity to raise the price of bread. But how about ultimate effects? Next year, convinced that there was no chance to get advantage from war prices, farmers would reduce their wheat plantings and increase something wheat plantings and increase something else—something for which the markets were still free. The inevitable result would be a big drop in the production of those things that were shut off from the world market, and a consequent increase in price. We should merely postpone for a year or two the price inflation, and incidentally interfere with the law of supply and demand. The foreign customers would look elsewhere for their supplies, and America would lose her grip in the foreign markets. A year of embargo would do more harm, both to of embargo would do more harm, both to the American farmer and to the American consumer, than high prices.
All this is plain enough, and is un-

derstood by people who have studied such marketing experiences. The point is that Congress understands it too—the majority of people in Congress and there is no reason to worry

Right now is the time to get the farmers in your State, as well as others, interested in good roads, looking up your state laws on road-building. Congress has provided for spending \$85,000,000 of federal money on state highways in the next few years, provided each State matches its apportioned share with a

the next few years, provided each State matches its apportioned share with a like amount of state money.

Secretary Houston the other day discussed the workings of this new act with the highway authorities of the States. He pointed out features not generally understood. One is that when a State accepts the federal plan, and pledges to match the federal appropriations it must make this pledge good for

pledges to match the federal appropriations, it must make this pledge good for the entire period covered by the act. This insures a good, fair, honest experiment, rather than, possibly, a one-year try-out and then withdrawal of the State from the agreement.

But there is need for immediate attention to state laws, because some States have no authority under which the State may build roads; therefore co-operation between State and Federal Government is not possible. The federal law provides, as to such cases, that where the State has no power to build roads the Federal Government may co-operate with individual counmay co-operate with individual counties. But this is so hedged about that it is likely to be almost impossible of practical operation. There must be some state authority to distribute the funds among the counties, and the counties that co-operate must pledge themselves to stay with the scheme throughout the life of the federal act. It will be well-nigh impossible to organize such a complicated co-operation among a group of counties in the State except under a state authority.

under a state authority.

Hence the need of getting your state laws fixed, this coming winter, so that co-operation between State and nation will be possible without delay. If for want of right laws your State loses a slice of the present appropriation, it will probably never catch up again.

The greatest benefit of this federal road co-operation will be in putting road-building in the hands of experts, and showing the whole country how it can be done and should be done. If the road money now spent every year were

road money now spent every year were not largely wasted, the roads would be pretty good. Mr. Houston told the road officials that \$250,000,000 annually is spent on roads in the country, but largely wasted. The co-operation plan is expected to work out a system under which it can be used wisely and well. That would mean that without any additional taxes a billion dollars would go into good roads every four years.

Get busy with the candidates for the legislature in your county. Get your clubs and unions and granges active; find out just how your state laws stand, and what changes are needed in them; and get your legislative nominees pledged to support needed changes. Now is the time for it. After election

it may be too late.

Raising and Selling Horses

[CONTINED FROM PAGE 3]

the big ones. We know of no district in the corn belt where any number of heavy horses, thin or fat, may be obtained. Formerly we could buy these feeders from the farmers, right out of work, feed them sixty days or so, and then sell them to go East, but the few

there was real danger of such a thing happening.

Well, there isn't.

we can find nowadays are bought right off the reel as soon as we get them to market. Farmers should try to get their horses fat before offering them for sale. We will give \$50 or \$60, or even \$75, more for a horse in full flesh than we could afford to pay for the same animal if we could see his ribs. At that, perhaps, it does not pay farmers to full-feed their horses for sale. Usually they can get enough without using their grain that way."

It never pays to offer a skin-poor

It never pays to offer a skin-poor horse for sale. He should be freshened up somehow on rest and good feed, and then he will bring enough more to make it pay; which brings up to the it pay; which brings us to the marketing stage of equine life. Resident or outside buyers are continually riding the roads seeking to buy horses. Time was, some twenty years ago, when farmers consigned their own horses to commission men in Chicago and other wholesale markets and had them sold by auction. Now that is all done away with. The buyers, who make a profession of the game, do all the shipping to market, so that the farmer is paid his spot cash in his own yard, usually promising to deliver the animal at a certain railway station on a certain day.

Just at present the foreign army outlet dominates the entire trade. This demand absorbs cavalry horses, or riders, and artillery horses, or gunners, as they are dubbed in the trade. The former come from the ranks of the commoner drivers and the latter from among the chunks, expressers, and wagoners bred on corn-belt farms. Prices paid for riders at points of inspection range from \$115 to \$165, and for gunners the actual range is \$160, \$165, \$175, \$190, and \$200. The absorptive power of this outlet is at least eight or nine for one of the commercial demand, hence most of the country buyers are catering to the foreign trade. In Chi-cago there are in full blast just now as

cago there are in full blast just now as many as seven or eight inspections, the British, French, and Italian governments being the purchasers.

Few farmers have any real knowledge of horse values. It always pays to visit a big market and put in a day or two watching sales there and discovering what sorts of horses are actually wanted and the various prices paid. Unfortified by such information, the grower is always at the mercy of the itinerant buyer, who offers what he pleases and pays in accordance with the degree of "preparedness" he finds on the part of the seller.

"I am finding plenty of demand in the East for all the horses I ship," said Joe Harris, who ships horses from Chicago to Boston. "I think the business will be mighty good this fall."

Col. John S. Cooper, the oldest established commission receiver in the Chicago market, recently are grief, to have

cago market, recently said on this same topic: "I believe we are going to have topic: "I believe we are going to have a fine horse business this fall commercially, and the foreign powers will buy just as long as they are at war. We have foreign contracts that will take eighteen months to fill, but, of course, they will cease on the declaration of peace. The entire East is bare of horseflesh, and it seems as though they would have to get motive power somewould have to get motive power somewhere. I have never known good big horses as scarce. It will pay farmers to keep on breeding that kind. There will always be a demand for them."

The manner in which mules are mar-

keted is altogether different from horses. Growing and selling mules is a professional stunt. The mules are raised by the farmers, and sold as weanlings when ready to take from the mothers. They are collected in big bunches and grown out either until they are two years old or until they are of full marketable age. Few breeders keep their mules after weaning time. Good hybrids, progeny of standard jacks, and good draft mares bring from \$75 to \$125, and sometimes more, at weaning

Owing to the peculiar character of the mule, it does not pay to carry him further when so much cash may be obtained for him at so tender an age. Mule foals are like horse foals in that they should be fed what grain they will eat during the summer, and kept in from the pestering flies, being turned out either with or without their dams at night to grass.

night to grass.

Finally, a most essential point in rearing both horses and mules is to have some good shedding in the fields so that they may seek shelter from the blazing sun or from storms. If horses are forced to stay outside in a bare field with the sun's rays pelting down on their undefended backs and pestered continually by the brutal flies, they will get thin in spite of all that may be fed them, and they will split their feet so badly, stamping in self-defense, that they may never come right again. The merciful man is merciful to his beast—and never was there straighter applicaand never was there straighter application of that proverbial saw than in the rearing of young horses.



President Wilson Signing the Rural Credits Act

President Wilson

Has Won Real Freedom-Has Secured Prosperity—

For the Farmer

The Wilson administration is the first that has dared to make common cause with the farmer against the usurer, the fake middleman, and the other human pests who in the past have grown rich on the fruits of the farmer's toil.

OR the first time in our national history the farmer has been freed from the domination of the extortioner and slavery to the favored few. Under President Wilson the farmer has been treated as a business man, and accorded his full rights and advantages.

Under the Wilson administration the average annual farm wealth production has been \$10,000,000,000 over a billion dollars more than the best previous showing. And the farmer has enjoyed the financial fruits of his work.

President Wilson Has Maintained Peace With Honor

No greater service has ever been rendered to any country by any man in any time. This alone warrants your supporting him. On the record of his administration's service to you, see what has been accomplished. In brief, here is the record:

1—Appreciation of the importance of agriculture has been shown through greatly and intelligently increased appropriations for its support.

2—Greatly increased provision has been made, through the enactment of the Cooperative Agricultural Extension Act, for conveying agricultural information to farmers and for inducing them to apply it.

armers and for inducing them to apply it.

3—Through the creation of an Office of Markets and Rural Organization, systematic provi ion has, for the first time, been made toward the solution of problems in that important half of agriculture which concerns Distribution—marketing, rural finance and rural organization. The appropriations for this Office, including those for enforcing new laws designed to promote better marketing, has been increased to \$1,200,000.

4-The United States Grain Standards Act will secure uniformity in the grading of grain, enable the farmer to obtain fairer prices for his product, and afford him an incentive to raise better grades of grain.

5—The United States Warehouse Act will enable the Department of Agriculture to license bonded warehouses in various states. It will lead to the development of better storage facilities for staple crops and will make possible the issuance of reliable warehouse receipts which will be widely and easily negotiable.

6—The Federal Aid Road Act will conduce to the establishment of more effective high-way machinery, stimulate larger produc-tion and better marketing, promote a fuller and more attractive rural life.

7—The Federal Reserve Act benefits the farmer by guaranteeing better banking, safeguarding the credit structure of the country and preventing panics, making larger provision for loans through national banks on farm mortgages and by giving farm paper a maturity period of 6 months.

The Federal Farm Loan Act

8—It was essential, however, that banking machinery be devised that would reach intimately into the rural districts, that it should operate on terms suited to the farmer's needs, and should be under sympathetic management. The need was for machinery which would introduce business methods into farm finance, bring order out of chaos, reduce the cost of handling farm loans, place upon the market mortgages which would be a safe investment for private funds, attract into agricultural operations a fair share of the capital of the nation, and lead to a reduction of interest. These needs and these ideals have been met by the enactment of the Federal Farm Loan Act.

This is not all but it is enough to indicate what has been accomplished.

That is Why the Farmer Will Vote
To Retain President Wilson In Office

This advertisement is published and paid for by the Democratic National Committee, 42nd St. Bidg., N. Y.





antee. Thousands in successful use. Write today for facts and pictures of what the Bates Steel Mule will do for you. Joliet Oil Tractor Co. 172 Benton Street Joliet, Illinois

Win a \$1,000 Prize

For Best Answers to Fifty Puzzle Pictures

TELL, folks, here's the second installment of pictures, for appropriate titles to which we offer \$3,500. As each picture is drawn to represent some farm implement or machine part or mechanical term, we call this our Farm Implements Puzzle Game.

The pictures now have no titles. You are invited to submit suggestions for them. Fifty such pictures will constitute the Game. Nos. 1 to 5 appeared in our September 16th issue, Nos. 6 to 10 are published below and five additional pictures will be printed in each succeeding issue until all fifty have appeared.

When all fifty have been printed (the last installment, Nos. 41 to 50, will appear in our January 20th issue) you can submit your sets of title suggestions, not before. You will be given until midnight, February 20th to prepare and submit your suggestions. ary 20th, to prepare and submit your sug-

The awards, totaling \$3,500 and to be divided among four hundred participants, follow: For the best set of title suggestions \$1,000; for the next or second best set \$500; for the third best set \$250; for the fourth best set \$125; for the fifth best set \$100; for the sixth best set \$75; for the seventh best set \$50; for the eighth best set \$50; for the ninth best set \$25; for the tenth best set \$25; for the eleventh to fiftieth best set \$10 each; for the fifty-first to one hundred fiftieth best sets \$50 each; for the fifty-first to one hundred fiftieth best sets \$50 each; for the one hundred fiftieth best sets \$5 each; for the one hundred fifty-first to three hundredth best sets \$2 each; for the three hundred and first to four hundredth best sets \$1 each; total, four hundred awards, \$3,500.

As space is limited here we cannot print all details of the Farm Implements Puzzle Game, so we have prepared a circular of information which contains all rules and instructions and general information. This will be sent free and to anyone, anywhere. Simply send us your name and address on a postal and say "Send details of your Farm Implements Puzzle Game."

For the convenience and guidance of participants, and to place all on an absolutely equal footing, and to make familiarity with farm machinery unnecessary, we have also published a list of about three thousand implements, parts and terms. This is called the Official Key Book as ideas for each pic-ture are obtained from the list of titles it contains and in it will be found the titles to the fifty pictures.

Copies of the Official Key Book are on public file in the offices and agencies of this publication and one copy will be placed on public file in any town when proper arrangements are made. We offer a Key Book free to anyone subscribing for FARM AND FIRE-SIDE for three years at \$1.00.

It is not a requirement that you subscribe, but as you will be renewing sooner or later, anyhow, we make this special offer. Or the subscription can be that of a friend.

For information only, send us a postal. To subscribe at the special rate of three years for \$1.00 and get the Official Key Book free, send remittance with the coupon below. Then while waiting for your Key Book and complete information, study the pictures, and jot down all the suggestions which occur to you. Then when you have the official list, you can check your notations and also get new ideas. Reprints of the five pictures which appeared in the preceding issue will be sent you free with Key Book if, when sending subscription, you ask for them.

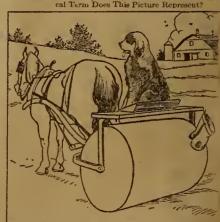
Whatever you do, don't delay. Get in this game at once. You know what Ben Franklin said, "One to-day is worth two to-morrows," and Frothingham, "Let the day's work be done as its hours are passing. Let not the opportunity that is so fleeting, yet so full, pass neglected away."

This Farm Implement Puzzle Game offers you not only many hours of helpful mental recreation, but golden opportunities. Someone will receive the thousand dollars. Why not you? It all rests with you. As one very advisable first step, send this coupon in









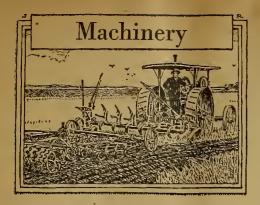
No.10—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

Special Subscription—Free Key Book Offer Coupon

Farm Implements Game Editor, Farm and Fireside Springfield, Ohio

I desire to play your Farm Implements Puzzle Game. Enclosed herewith please find one dollar (\$1.00). Please extend my subscription to FARM AND FIRESIDE for three years from present expiration date. (If you are a new reader, subscription will be started with first issue sent you.) Also send me, free and postpaid, one copy of the OFFICIAL KEY BOOK containing a list of farm implements, parts and mechanical terms to be recognized and used in supplying titles to the fifty pictures, together with other data and information regarding the Game

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What One Tractor Does By J. R. Kuntz

MUCH has been and is being said about the right size tractor for the small farm. Our farm, "Elmwood," contains 147 acres. Sixteen months ago we sent for catalogues from different tractor manufacturers. Finally we decided that an 8-16 tractor was the proper size to get for all-around use on a farm of this size. The makers claimed it would pull three plows where a good team would pull one, and do other work

When the tractor arrived it was too late in the season to plow for oats, so the first trial given it was in turning up a piece of five-year-old timothy sod for corn. We had never even seen a tractor plow before. It didn't work and things looked discouraging; but the tractor was bought and paid for, and we decided that it must work, as it had been

built for that purpose.

An hour passed. It did some awful plowing, much to the delight of doubting onlookers; but soon we caught on to the trick, and within the second hour it was turning over three ribbons of sod in long smooth furrows. A tough timothy said is the hardest test that could be sod is the hardest test that could be given a plow and tractor in this part of Indiana, except it be in the fall when the ground is baked hard by a long dry

Next we used it successfully to pull two disk harrows and a clod crusher, all at one time.

By using three plows, which this size of tractor will pull in most any kind of soil, one man can take care of all the plowing on the average farm up to 200 acres and be able to do it when the ground is fit to work properly. Put in a full ten-hour day in the field and you will have six or seven acres plowed, depending on condition of ground.

Forty acres in corn, oats, and wheat is about the average for a 200-acre farm. Each field can be plowed in six or seven days. Compare that with plowing 40 acres with one three-horse team—twenty days at least of hard work that leaves team and driver in a condition that says, "You can plainly see we have done it."

Crops Put in Quickly.

The disking, harrowing, and planting can be done in less than half the time required by a team. Thus your crop goes into the ground in a short time when conditions are right.

Our tractor has proved in the sixteen months' time that it will take care of all the heavy work very well. And what it does here it will do any other place that has no worse soil than is found here, which is mostly clay bottom with black loam subsoil.

It will really take the place of nine horses and three drivers, plowing in a given time as much as three good threehorse teams would do, and one man handles the outfit. No work is required in the morning to get ready that could ompared

to get along without any horses at all, extra help.

yet with a tractor on the place one can get along very well with a light team.

The harvest of 1915 was very rainy. The fields were soft and in places water was standing. It took three good horses to drag the binder along with an irregular motion. The binder would clog up and drag the bull wheel, which caused doop disches made trouble, and delayed deep ditches, made trouble, and delayed work. Horses were soon worn out and had to be changed or allowed to rest. To make it still worse, it was very hot. Finally we unhitched the horses entirely and hooked the tractor to the binder. It went forward. The hot weather and flies did not bother it. The speed was quite that of a fast-walking team, but the motion was steady, there was power to spare, and no stops were needed for rests.

The binder didn't clog up and, the wheels of the tractor being wide, did not

wheels of the tractor being wide, did not mire down like horses.

In the hay field the tractor can be used to pull the hay loader and wagons, which is a hard pull, even for four horses, when the fields are soft.

In the cultivation of corn and other crops and for hauling a wagon, a small tractor of about 5-10 horsepower would be very handy. In my opinion it would be better to have two sizes than one very large tractor for a 200-acre farm. Have one of 8-16 or 10-20 for the heavy plowing, disking, harrowing—the horsekilling work; also for heavy belt work. killing work; also for heavy belt work. Use the smaller one for the mower, tedder, rake, planters, cultivators, and, in pinches, for one plow to help out. The two will cost slightly more than a thousand dollars.

To use a large tractor for light work is not a paying proposition. However, when but one can be purchased, the 8-16 or 10-20 size is best.

Earns \$100 Sawing Wood

Many farmers think the cost of fuel consumed is out of reach of the average farmer. It is not. The corn, oats, and hay to keep one horse in good flesh, if worked hard, will cost around \$50 to \$60 in the course of a year. True, most of us raise this feed, but there is a market for it, and it can be turned into cash.

for it, and it can be turned into cash.

To run our tractor, in the plowing of 70 acres, double-disking it, then harrowing with both spring-tooth and spiketooth harrows, cutting 56 acres of heavy wheat and oats, husking corn, baking hay, shredding fodder, sawing wood, and using it on roads during the first nine months that it was in use on the farm cost us \$64.98. This was the cost of all fuel oil consumed oils grease reof all fuel oil consumed, oils, grease, repairs and freight. Thus at the cost of keeping one horse this tractor has done all the heavy work of the farm for nine

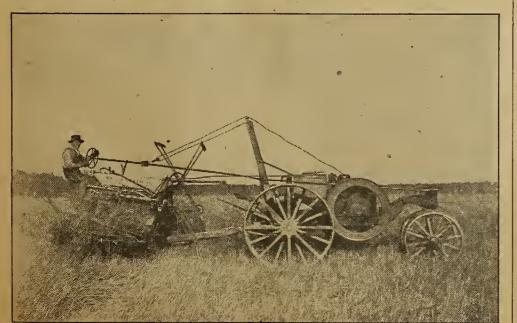
During the winter months it was used for running a wood saw. This for the neighbors, in which over \$100 was earned. This paid the operators \$2 each a day, covered the fuel used while sawing, and left enough over to purchase fuel and oils for operating the tractor for all of the following summer. To use with a saw outfit this size tractor is just right. You can go almost any place with it, and it will run a 34-inch circular saw with power to cut off the largest log that men can lift up to be sawed, cutting through a 16-inch piece easily.

With eight or ten men to bring the poles or logs up, 12 cords an hour can be cut, though 10 cords are a good aver-

You will find that it has plenty of power to run a four or six roll husker or a large hay press, making 17x22-inch bales. It will run a large corn sheller, also a small clover huller.

But plowing is the time when the farmer will think of the tractor as his great helper more than any other time horses.

While it would be almost impossible in for its best to save the horses and



The extension steering column made harvesting with this tractor last summer a oneman operation. The motion was steady and there was power to spare



If You Owned His Watch —you would be proud of it.

Your pride would come from the fine accuracy of the watch. Every time you looked at it you would be sure of the time. You would say "my watch" the way a proud father says "my son" or the owner of well-kept land says "my farm." To feel this satisfaction you don't have to own this man's Hamilton Watch.

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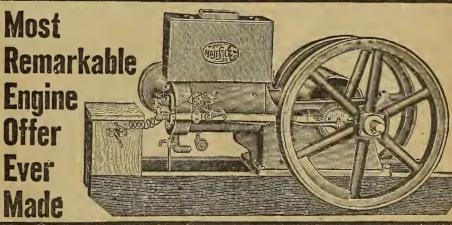
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The Great Majestic Engines Sizes 2, 3, 5, 7, 9 and 14 H-P. STATIONARY, HAND PORTABLE, HORSE PORTABLE

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The Majestic is the simplest, most durable, most powerful for its H-P. rating and most economical-to-pperate gasoline engine. Not a bit like old style, over-beavy types of gasoline engines which consume enormous amounts of fuel and are, therefore expensive to operate; or like others, that are so light they literally jerk and tear themselves to pieces when running at high speed or under a heavy load.

The Majestic is the "happy medium"—neither too heavy nor too light. Has fewer number of parts—a marvel of simplicity. Perfectly balanced—just the right weight for the power it is designed to develop—no excessive friction. Has big improvements in all vital points. Convenient, compact. Gives good, efficient service without tinker or bother.



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Mail Coupon NOW THE HARTMAN Co., 4039-41 LaSalle St., Chicago Without obligating me, send your Engine Catalog No. E-254 and particulars of Farm Credit plan.

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This wonderful Hanes Underwear is plumb full of value. It has everything you want—warmth, comfort, fit and wear, at a price you want to pay-65c a separate garment or \$1.25 a union suit.

Buying Hanes Underwear is like buying cream at milk prices. It's cotton all the way through—soft, clean, warm, sweat-absorbing cotton. It's honest and sensible—no fancy touches—just the biggest load of value that 65c or \$1.25 ever carried.

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UNDERWEAR

Hanes Union Suits have a comfortable Closed Crotch that stays closed; Elastic Shoulders with Improved Lap Seams which "give" with every motion; snug-fitting Collarette which always keeps the wind out of the neck; Improved Cuffs at wrist and ankle which hug close and do not stretch out of shape; and every button is a good Pearl Button.

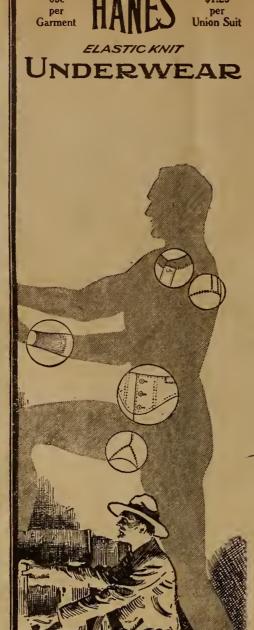
Hanes Separate Garments have Double Gussets to double the wear; a Comfortable, Staunch Waistband; Improved Cuffs which hug the wrists and won't flare out; a snug Elastic Collarette which never gaps; Elastic Shoul-ders with Improved Lap Seams which

"give" with every motion.

Pre-shrinking keeps all Hanes Underwear elastic and true to size and shape. Seams are unbreakable where the wear is greatest.

No more darning or patching—no more frayed and "holey" underwear. Did you ever hear of such underwear anywhere under \$2 a suit? We never did. See a Hanes dealer. If you can't find one, write us.

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Gets the Most Out of Apples By Frank W. Orr

WANT to bring to the attention of FARM AND FIRESIDE readers some of my side-line orchard experience. I find that it is profitable materially to increase the income from my apple crop by sorting and grading the apples much more closely than I formerly did. For example, instead of making only two grades—No. 1 and No. 2—and letting most of the crop go into these two grades, I now make a Fancy grade, a Select grade, and a No. 1 grade. The "Fancies" are the cream of each variety. The Select grade contains many apples almost as fine-looking as the Fancies, but run somewhat smaller in size and there are some slight imper-The No. 1's are smaller, but are uniform in size and contain no serious imperfections or very noticeable injury from insects. Classed and graded in this way I have perhaps one third of my crop to dispose of in other ways. But by taking pains to make known the superiority of my well-graded, carefully selected apples, I am getting from one third to one half more for the packed fruit I now sell, and from the remainder of the crop, made into cider and sold as vinegar, boiled cider, and apple jelly, I am able some years more than to double my orchard income as compared to my old plan of selling. are uniform in size and contain no seri-

Handled as I have described, there is no loss from freezing and rotting of the apples. As soon as the grading of the crop is finished all of the apples that have failed to come under the three grades mentioned are then in sound, clean condition and at once go into cider. Formerly I used to have long waits trying to make sale of the mixed

and poorly graded crop, with the result that half of them became so decayed they were unfit to make good cider.

By making use of some of the smaller sizes of improved cider-making outfits, either hand outfits or those that can be operated by gas engine or tractor, the orchard owner can be independent of orchard owner can be independent of public cider mills and be sure of having his product just as high-class as are his apple grades.

Picking with a Pack By C. O. Myers

APPLE PICKERS have worked out various solutions to assist in the ease and rapidity with which the fruit can be gathered when picking from large trees. Half-bushel splint or light stave baskets with bails are favorite containers used by most expressioners. containers used by most experienced pickers. When used in the trees or on long ladders, a strong hook is fastened to each bail, which allows the picker easily to fasten the container to rung of ladder or branch of the tree being picked. Some pickers prefer large gal-vanized buckets or pails holding about that will a half-bushel. These, being smooth, slip

more readily through the branches, and when accidentally dropped the heavy galvanized iron container suffers less than the basket when it comes in contact with the ground. Whatever container is used, a light strong rope or strap, such as a harness line, is needed with which to lower the filled containers from ladder or treeton to the member of the

and to lower the filled containers from ladder or treetop to the member of the crew who does the emptying.

Another favorite container used by some rapid pickers is a bag in the form of a pack attached to and around the shoulders by a wide soft band. This is filled through slits in front of the shoulders and the apples pass down and back into the bag by gravity. This picking pack can be made to hold three or four pecks, and saves much time in emptying, but the labor is considerably increased as the picker has to carry a load much of the time, weighing 20 to 50 pounds. This makes a hard job even

Rapid and less laborious picking can be insured by training the trees when young to low heading, so that stepladders will enable pickers to reach the greater portion of the fruit. Fruit borne 18 to 25 feet or more from the ground doubles the cost of harvesting orchard fruit.

A Co-operative Boost By B. F. W. Thorpe

AN INTERESTING side light on the benefit of co-operation in marketing sweet potatoes comes from North Carolina. Last year the Carolina Potato Exchange was enabled, during its first year of operation, to put North Carolina sweet potatoes on the map. Notwithstanding the fact that Eastern Shore or Virginia sweet potatoes have long held a reputation for excellence, the Carolina Potato Exchange was able to gain a recognition for its pack and gain a recognition for its pack and brand for the North Carolina sweet potato for the first time since the sweet potato industry became prominent in

On the New York market last season the North Carolina sweet potato was quoted higher than the Eastern Shore

Virginia potato.

One good result of this success in marketing is to lengthen the digging season of the sweet potato in North Carolina. Formerly North Carolina sweet potatoes have been pushed onto the market immaturely, in order to forestall the sale of the Virginia stock. This necessary rush in digging and marketing sary rush in digging and marketing North Carolina sweet potatoes resulted in quite a few of them reaching the market in poor condition and not fully mature. With the good offices of their sweet potato marketing organization, the growers can now dig and market their products at their leisure, making sure that lack of maturity will not interfere with the best returns from their crop.

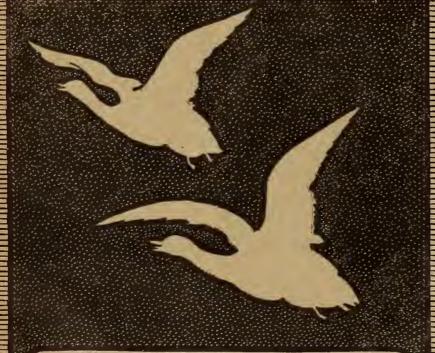
EVEN if you have hunted out the peach-tree borers from the peach and apple trees in June, better take another look in October so as to find any that may have escaped. The work can be done more thoroughly as a rule in October than when the press of work is greater in June.

ONE of the most successful orchard men of my acquaintance uses this sentence for a fruit motto, kept always within reach of his help when grading and packing fruit: "Every doubtful apple is a cull." This is a fruit slogan that will bear repetition all over the



A strong bran sack can soon be fashioned into a picking pack. For lofty limbs of high-headed trees, a pack saves many a toilsome climb

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ASK FOR THE W BRAND



Live Stock

Enjoying a Sheep Boom By Lee R. Scott

By Lee R. Scott

FINE wool sheep are now enjoying a boom as well as sheep in general. Not since 1888-89 have sheep been such good property. I believe the outlook to be good for years to come. The world faces a shortage of sheep as well as of cattle and swine.

I believe there are three causes for the present sheep shortage. Low prices of wool and sheep made farmers indifferent to properly caring for and breeding their sheep. I know of many flocks that, as the saying goes, were allowed to "run out or breed out," and were sold off and have never been renewed. Former sheep raisers have let their farms grow up to weeds which seed their own land and that of their neighbors to weed pests of all kinds.

The American farmers are anxious to take good care of their stock when prices are high, but when prices fall to a low level they fail to give the required good care, and sell out just as soon as possible and seek something else.

In sections where coal mines and mills are operated, and in fact almost anywhere, the cur dogs are a hindrance and a discouragement to any man who is trying to develop a valuable sheep

and a discouragement to any man who

gaining well.

I make a mixture of wood ashes, copperas, and salt, using two gallons wood ashes, three gallons salt, and one pound powdered copperas thoroughly mixed with the ashes and salt. I sprinkle a little of this mixture in the feeding trough, and feed grain on top of it.

I have had but one experience with stomach worms in sheep, and that was following a very dry summer. The gasoline treatment and worm powders saved a few of the sheep, but I lost most of them affected with the worms.

In winter I feed a mixture of corn, oats, and bran or sucrene, and use clover hay, alfalfa, and corn fodder for roughage. All sheep are allowed to run out on a grass lot every day that snow or rain is not falling.

or rain is not falling.

In summer during wet seasons, I try fetal pigs.

to keep the sheep on short grass, as they will fatten faster and keep their

they will fatten faster and keep their feet in better shape, and are not so likely to be affected with scald, which, if neglected, may develop into the old-fashioned foot rot.

Scald can be cured by changing pasture in connection with the application of blue vitriol.

I mix equal parts of butyr of antimony and powdered blue vitriol in a glass-stoppered bottle, and use a table-spoonful of the mixture in a gill of water with which to swab a little on the scalded places in the feet affected.

EDITOR'S NOTE: The probabilities are that Mr. Scott failed in administering the gasoline treatment in some degree. Most experienced shepherds now consider this treatment a well-nigh sure remedy for stomach worms if used in time, according to the following directions. The dose is as follows:

Five ounces of whole milk; for an old sheep, one and one-half tablespoonfuls of gasoline (for a lamb, only one tablespoonful of gasoline). This well shaken together and given to the sheep as a drench, as above stated, three mornings in succession on an empty stomach, and then one more dose after eight or ten days. Frank Kleinheinz says: "This remedy has cured for me every sheep that was infested with internal parasites."

Sow Pays Quick Returns By W. L. Blizzard

THE oft-repeated quotation that the brood sow is the "mortgage lifter" was never more true than at the present was never more true than at the present time. There is no animal kept on our farms that will so surely and quickly return us a profit upon feed consumed and care given as the brood sow.

A hog will produce a pound of increase for every four to five pounds of feed consumed, while fattening cattle will require from ten to thirteen pounds to produce the same amount of increase.

anywhere, the cur dogs are a hindrance and a discouragement to any man who is trying to develop a valuable sheep business. In a strictly rural district the gun is a very good answer to the dog problem, but in a thickly settled community the gun is too noisy a remedy. Killing a cur dog worth ten cents by the gun method cost me the death of a valuable breeding bull.

There has been quite a loss in young lambs for several years past in this locality from different causes which do not seem to be easily overcome. Quite a proportion of the ewes in good health do not have milk for their lambs, and others refuse to own their lambs, and others refuse to own their lambs, and acknowledge of their lambs. These drawbacks have lessened my profits for a few years back, and of others also who are good and experienced shepherds.

In order to know just what my sheep are doing, I look after them each day, surmer and winter, to see if any individual is not doing well. In summer they should have a change of pasture every two weeks or less, and should be given a little grain frequently whenever pasture is not sufficient to keep them gaining well.

I make a mixture of wood ashes, coppers, and salt, using two gallons wood ashes, three gallons salt, and one pound powdered coppersa thoroughly mixed with the ashes and salt. I sprinkle alittle of this mixture in the feeding trough, and feed grain on top of it. I have had but one experience with stomach worms in sheep, and that was following a very dry summer. The gasoline treatment and worm powders saved a few of the sheep, but I lost most of them affected with the worms.

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In summer during wet seasons, I try own body; for the development of the



Not in years have sheep been such good property as now. This is because the world faces a shortage in sheep as well as cattle and hogs

Dividends of real tobacco happiness for you, via



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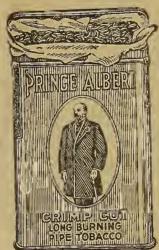
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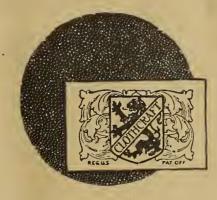
why it hits the cheer-up spot in your system, sunrise-to-taps! Just does pour in the smokesunshine, it's so chummy to the fussiest taste and tenderest tongue!



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Buy Prince Albert everywhere tobacco is sold in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors and in that clever pound crystal-glass humidor with sponge-moistener top that keeps the to-bacco in such fine condition.

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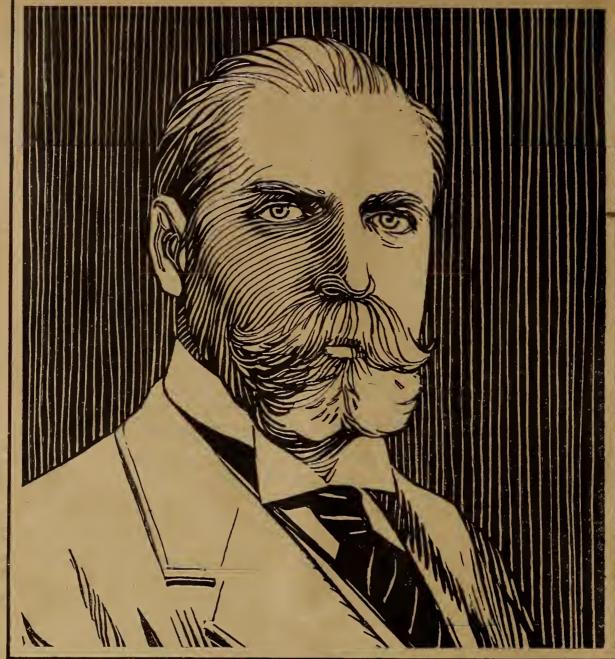
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-THEODORE ROOSEVELT





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-WILLIAM H. TAFT

The LIFE-STORY of CHARLES E. HUGHES

BEGIN with the year 1905. Those were dark days in New York State.

The "House of Mirth" was more popular than the Executive mansion at Albany and the "Black Horse Cavalry" were in the saddle. The great insurance companies controlled the state insurance department as a matter of sacred right, the gas companies controlled the Gas Commission, the railroads controlled the Railroad Commission and the big public utility corporations ran amuck as they pleased, while they all combined to control the powers behind the Legislature.

These were the conditions when, by a happy chance, there came quietly but suddenly into the public life of the State the refreshing personality of one of the least known but ablest attorneys of his time, Charles E. Hughes.

Attacking the Gas Monopoly

A legislative committee went down to New York City to investigate the gas companies.

They needed as their attorney and chief investigator some effective lawyer who was not entangled with the far-reaching ramifications of the Wall Street powers. Most of the great lawyers were ineligible because they had followed the custom of the day in accepting "general retainers." Hughes it seemed never accepted such fees, a personal rule of

conscience against easy money which had an unexpected reward.

The committee asked him to serve them. He accepted reluctantly for he disliked notoriety, and specified that he must have an absolutely free hand. Little knowing what was to come, they pledged themselves not to hamper him. Some of them were sorry afterwards, for Hughes led them at a tremendous pace into the innermost retreats of high privilege, mastering the most intricate arrays of figures and the most devious technicalities of the business with an intellectual grasp that amazed and terrified his opponents.

The Fight for Honest Insurance

When the insurance investigation came along a little later, Hughes was the logical man to conduct it. The whole world watched this fearless stranger as he plucked the dignity and mystery from towering figures in the financial and insurance world, and revealed them as nothing more than merrymakers with other people's money.

Sinister influences tried to stop him; they jerked his coat tails. "Don't open up that bank account," they whispered. "That is where our party campaign funds were kept."—Whereupon that particular bank account became the special object of his most searching attention.

He put prominent Democrats on the stand first, and it was expected that he would follow the usual precedent of not disturbing the leaders of his own party. But that was not Hughes' way! The great Republican leaders got their turn in due time and were mercilessly exposed. You reap the benefit of Hughes' brilliant work in that investigation, every time you pay a life insurance premium.

Secretly desiring to remove such a persistent investigator, they nominated him for Mayor of New York. He was not to be diverted from his uncompleted task. He waved the nomination aside and went on fearlessly and persistently until his great work was done.

A New Kind of Governor

The next year his party, torn by factions, sought a leader who would stand out above all factions and assure victory. A convention that would have preferred some one else nominated him for Governor, without his lifting a finger to get the nomination.

Then followed those inspiring four years of his Governorship, still remembered with a thrill by every upward-looking citizen of the State.

Exit Bossism

The party leaders came to him with the names of men whom they had selected to be

his subordinates. The appointments required the consent of the Senate. They controlled the Senate. The Governor thanked them dryly for their kindness in doing his work for him-but he had already selected satisfactory appointees and the names would go to the Senate on the morrow. Patiently they explained as to a child, that things were not done that way in politics—that "the organization" would be against him—and gradually, as the fruitless argument proceeded, they began to realize that here was a man who would cheerfully go down to defeat with all his colors flying, for a righteous cause.

Unafraid of Defeats

They did succeed in preventing, for the time being, the passage of his direct Primary Bill, his Massachusetts Ballot Bill and his Short Ballot Amendment. He struggled hard for them, but he left office with this part of his work still unaccomplished. But the issues that bore his name would not die. Three years after he left office, both a real direct primary law and an office group ballot law were written into the statutes of the State, while all parties vied with each other in professions of devotion to the Short Ballot principle.

Yet there never was a time when Hughes could not have forced through his program of reform immediately by trading "patronage" for measures. There were the State employees in the Capitol, for instance, the stalwart political henchmen of one of Hughes' bitterest foes. A wave of Hughes' hand, the dismissal of one of these job holders with its implied threat toward the rest, and his opponent's machine would have collapsed! Yet Hughes would not stoop to such expedients, no matter how tempting was the objective. State employees learned that their jobs were safe, if they did their work, and unsafe if they didn't.

The End of "Deals"

Neither would Hughes make deals with the legislators with bill for bill. If a champion of his big measures slipped through an improper little local bill, Hughes would veto it sharply. If a good bill came along originating with a legislative arch-enemy, Hughes would gladly sign it.

Taming the Utility Corporations

But to return to his record of achievements. His first big fight revealed new methods—new theories. He proposed the Public Service Commissions law, a law with real teeth in it.

Most of the States have such laws now but it was a new and radical thing in those days when the public utility corporations were accustomed to doing about as they pleased. The legislature soon showed that it had no idea of taking the bill seriously.

Hughes then undertook one of his famous "appeals to the people." He began to accept invitations to speak in various parts of the State, and he spoke always on this one topic. The State began to think and then to talk. Hughes did not call his opponents bad names or impugn their motives. But letters began to pour into Albany asking representa-

tives where they stood. The opposition changed from contempt to alarm. Soon they were saying that of course they approved the bill—with modifications. Finally the fight centered on the modifications—adroit tricks to get the teeth out of the law, but in the end, Hughes won completely.

Great Days for Labor

There was another great battle over the law for Workmen's Compensation for industrial accidents. It was a new idea then and much harder to put through than it would be to-day. This law, too, had teeth in it—Hughes saw to that. It made the employer in certain trades liable for the accidents that happened to his employees, regardless of the old doctrines of "assumption of risk" and "contributory negligence," so that injured employees could recover damages without a law suit. It was the pioneer compulsory law and formed the basis for all such subsequent legislation in America.

Hughes acquired great strength with Labor by this piece of work and by the rest of the fifty-six labor laws that he helped to put through.

"He was a great governor," said the organ of the State Federation of Labor, regretfully, when his term ended and credited to his brief four years one-third of all New York's labor legislation!

The Big Race Track Gambling Fight

Then there was the fierce battle for ending race track gambling. The great race tracks had become huge living roulette wheels with their inevitable train of defalcations, suicides, and demoralized lives. Hughes showed up these glittering and picturesque affairs in their true and sordid light, converted the State to his way of thinking and jammed reform through in the face of powerful and sinister opposition.

General Interest Above Special Interests

When he ran for the Governorship the second time, it was calculated that he had affronted no less than fourteen great special interests any one of which would have made an ordinary Governor hold his hand for the sake of his political future. But committing political suicide seemed a favorite amusement with this fearless executive who put his faith in the people and waited for them to come slowly but surely rallying to his support.

How "His Soul Went Marching On"

So the name of Hughes became a thing to conjure with in New York politics for years

after he left the State to take his place on the Supreme Court. To have been a "Hughes man" has been an asset ever since. To say "Hughes favored this measure" gave it standing. Republicans, Democrats and Progressives have used the name of Hughes to win support for men and measures.

The State administration still feels the impetus he gave, the new life and vitality which he injected into humdrum departments. He brought into office a great group of the strongest and most expert administrators that ever served the State.

He was keenly aware that passing a good law was not enough if the enforcement of the law or the realization of its beneficent opportunities were intrusted to partisan hacks or good-natured nonentities.

Back in the Arena Today

The Hughes of those great days is back in the arena today—back at the very moment when we need at Washington the strongest and ablest executive the nation can supply. One can understand from his own record the impatience with which he has been forced to watch the empty rhetorical "triumphs" of the present administration, the endless catering to mere expediency, the appointments of "deserving" politicians made for the party's sake at the country's expense, the inefficiency that is inevitable when trembling hands hold the reins of government! Such things are incompatible with Hughes' character. He is built of sterner stuff!

Let's Have a Great President!

It is easy to foresee what kind of executive he will make! We have but to look back at what he did when Governor!

His cabinet will be one of the strongest in the Nation's history. He will choose fullsized men, who will serve the country in the same spirit he serves it. Nor will he lack material. He has in his party a far better array of experienced ability from which to draw than his opponent can find among his oldfashioned sectional-minded southern Democrats.

We can see him in action, master of the hard fact rather than the happy phrase. We can see his fine passion for public service freshening the whole Federal administration. We can see the joyful satisfaction he will take in vetoing pork-barrel appropriations and petty pension grabs!

And we can see him when foreign ambassadors come in and meet that straight unfearing look of his and listen to a simple unvarnished statement of what is permissible and what is not!

These are days that demand true greatness at Washington.

And Charles E. Hughes is the man!

Enroll in The National Hughes Alliance!

It is a union of men of all parties.

The Hughes Alliance is not the Republican party; it is not a party at all.

Whatever your political creed, you can join the Alliance without cutting loose from your own party.

There are no dues; no pledge to support any party platform or any candidate except Hughes.

Women may enroll with the Woman's Committee through The National Alliance.

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- 1. Enroll me in The Hughes Alliance as a voter who will support Mr. Hughes in the coming election.
- 2. Enroll me as a member of The Hughes Alliance. I attach check which you may use in your efforts towards Mr. Hughes' election.

IV ame.

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A Hughes Alliance Badge will be sent to all who enroll



Priced Car

-almost without exception this is the first remark passed by those who have seen the new Allen Classic.

Never before, except in high priced cars, has so much beauty of line and finish-so much mechanical perfection been offered to car buyers.

It is a real "Classic."

Words cannot picture the handsome "smoke brown" color with its fine gold striping and the rich, Spanish Brown upholstery which gives the finishing touch to this decidedly distinctive and attractive car.

Or if you prefer, it can be had in two other finishes—gray or rich blue. All three body colors are furnished with light cream wheels completing a combination of striking beauty.

The new Allen Classic offers a rare opportunity to buy a car which combines beauty and mechanical perfection at a price much lower than you would ordinarily expect to pay.

37 H. P. 3 1/x5 inch, 4 cylinder motor Two unit electric starter and lights Stewart-Warner fuel feed, tank in rear 55 inch rear springs
Full floating rear axle
Large, easy acting brakes
112 inch wheelbase
Weight, 2300 pounds

Classic Touring Cars and Roadsters, \$850 Model "37" Touring (5 pass.) and Roadster (2 pass.), \$795 Coupe (3 pass.), \$1075 Sedan (5 pass.), convertible type, \$1095 All prices f. o. b. Fostoria

Ask for the Allen Autolog, and large handsome reproduction of "smoke brown" Classic in actual color



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I have been building engines right here in Kansas City for 30 years, and am given the highest credit by Dun's and Bradstreet's. I do not tell you this boastingly, but just to let you know that I must be dependable or I could not have been so constantly successful in a business extending over so many years. This record also enables me to buy the very highest quality materials at lowest cash, big-quantity prices.

I have always built the very best engine I could, regardless of price and profit. I sell direct from factory to user—the one small factory profit is all you pay. Formerly the retail prices of my engines were double. I can sell at a very, very close margin, because of my big business—if I only make one dollar clear profit on every year!

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Can't Inflate Tire

By W. V. Relma

AN OHIO car owner reports that one of the tires on his machine is apparently in good condition, but he is unable to pump it up. The tire is 30x3½ inches.

A matter of this kind will do no harm so long as the tire holds its air, but in the course of a few weeks it will gradually lose air and may then rimcut. If you suspect this has already

occurred take it off and examine it.

The trouble described lies in the valve plunger, which is either gummed up or worn out. The size and make of tire does not have any bearing in the matter. Simply unscrew the valve plunger with the top of the valve cap and put in another. These little plungers cost about five cents apiece, or six for a quarter, and it is a good plan to have a supply of them in the tool have have a supply of them in the tool box.

Gospel Spread by Gasoline

AT a recent church gathering the automobile came up for discussion. In one village the pastor of the church had been struggling along and trying to support a family of four on \$550 a year. Finally a wealthy farmer presented him with a light automobile, and arranged to have three more churches located in neighboring villages placed under his neighboring villages placed under his charge.

Now the pastor receives a total of \$1,600, on which he can support his family in comfort, serves all the churches well, and has increased his number of personal visits to the homes of his parishboners. Each church pays its share of the automobile's upkeep.

Garage and Farm Office By A. L. Roat

I BUILT this garage convenient to the house, but at a distance from the barn and outbuildings, thus reducing my insurance rate. In the garage I have a work bench, with tools handy, and aleasts to attract outs accessories. and closets to store auto accessories. There I also keep the carbide for my auto lights and for the plant which lights the buildings.

lights the buildings.

I did the digging, foundation, floor work, and the inside finishing myself, and so reduced expense. I believe it is always advisable to put up permanent buildings. Consequently I built my garage on a concrete floundation, with a concrete floor. The garage floor is underdrained, and water supplied from the house tank makes it convenient for washing purposes and for filling the radiator.

diator.

The garage is 18 feet wide and 25 feet long. In it I keep a pleasure car and a small auto truck. There is plenty of space to work when both cars are in the garage. At the back end of the building I partitioned off a room extending the width of the garage, and made an office there.

In the garage is 18 feet wide and 25 tions, grocery, meat, and even ice-cream deliveries are made regularly by up-to-date concerns in the country as well as in the cities.

There is every indication of coming freight service via motor truck to towns located on good roads but removed from railroads. In the West and Southwest, enterprises of that sort have already

The partition is of glass frames which slide either way. I keep a small coal stove in the office, which in winter heats the garage enough to permit water from freezing in the auto radiators. On three of the side walls I have two win-dows to admit plenty of light. The not operate an automobile freight line?

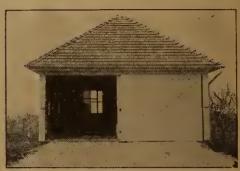
front of the garage is composed of two doors which slide.

After I selected the location I dug out

After I selected the location I dug out the ground a foot deep and underdrained what was later to be the floor of the garage. The building faces on the lane, and the back of the garage is toward the fields. The foundation is four feet high in the back and two feet in the front, to make the building level. After the foundation was marked and squared off I built forms to hold the concrete. Then I mixed one part cement, two parts sand and four of stone with water, poured it into the form and tamped it down. When the concrete was dry the form was removed and the space inside filled with dirt and stone tamped down well up to six inches from tamped down well up to six inches from the top of the foundation. Coarse concrete was laid four inches thick and tamped down. Then on that the regu-lar floor "mix" was laid. The floor slopes from the four sides of the build-ing toward a center drain.

The building has plenty of light, and

during the summer months is very cool because of screens in the windows. garage office is always comfortable and inviting. I have had my office in other buildings, but none of them compared to the one in the garage. It is clean



This garage is 18x25 feet, and has plenty of room for two cars and supplies for them. There is an office in the rear end

and just the place to transact the business duties of the farm. The records are kept there and all the work for the year is mapped out and tabulated for its specified time and season.

Tire Economy in Winter

TO SECURE the best service from automobile tires in winter, avoid driving in ruts on frozen roads. Deep automobile tires in winter, avoid driving in ruts on frozen roads. Deep ruts chafe the side walls of a tire. Have non-skid tires at least on rear wheels; better on all wheels. Take care not to apply tire chains so tight that the metal will gouge the rubber. Having observed these precautions, drive carefully and apply brakes gradually when stopping.

Country Freight

By Carlton Fisher

THE motor truck and trailer shown in the picture below are owned by an Ohio produce dealer who collects butter, eggs, and poultry from a large territory. The poultry is carried in crates hung below the trailer. This outfit has given satisfaction, as it is speedy and reliable the year around.

Rural mail routes are also gradually becoming motorized and with the development of parcel post the use of a trailer for carrying large parcels seems the logical development. In well-settled sections, grocery, meat, and even ice-cream deliveries are made regularly by up-to-date concerns in the country as well as

started, and trips are made on a definite. schedule. The pleasure car has paved the way for this development, which seems to offer splendid opportunities for young men mechanically inclined. Why not operate an automobile fraight line.



If a produce dealer can operate an outfit like this on country roads, there seems to be no logical objection to parcel post including larger parcels

HERE are some interesting facts contained in a new government circular entitled "Automobile Registration, Licenses and Revenues in the United States, 1915."

States, 1915."

There is an average of slightly more than one motor car for each mile of rural public road in the United States.

The average registration fee collected in Vermont last year was \$18.10 per motor car, while Minnesota charged but \$1.50 for a three-year period.

Texas charged 50 cents for perennial registration, the cheapest rate of all States except Wyoming, which required no registration whatever

no registration whatever.
Various scales were used in other
States. California charged 40 cents
per horsepower. Florida charged according to seating capacity. Registration for a two-passenger car was \$3, nd a seven-passenger car \$10. West Virginia and Arkansas charged

a flat rate of \$10 for all motor vehicles, Delaware, Wisconsin, and Kansas \$5, Nebraska, North Dakota and South Da-kota \$3, Montana and the District of

Vermont, which collected the most money per head from automobile owners, charged \$1 per horsepower for the first registration, 75 cents per horsepower for the second, and 50 cents per horsepower for all subsequent registra-

tions.

In Alabama the probate judge collects the fees; in Idaho the state highway commission takes it through the county assessor. In Mississippi it is the state auditor, in Texas the county clerk, but in most other States either the secretary of state or the commissioner of motor vehicles takes the registration fees.

In spite of this varying scale the registration of motor cars in the United States has increased 5,000 per cent in the last ten years.

the last ten years.

Traveling Steep Hills

Some drivers otherwise skillful are frequently at a loss to know how to proceed when their car refuses to climb a steep hill. Going down a steep hill safely is also something of an art. Nearly all standard makes of cars have enough power to climb the ordinary steep hill, but if the gasoline tank is low down and only partly filled, the gas may not feed into the carburetor.

In such cases you have two alternatives—either get more gasoline, or turn the car around and back up the hill. On steep winding hills which you are climbing on low gear, use the horn liberally as a warning to others who may be coming down the hill. On low gear it is difficult to turn out quickly to avoid a rapidly descending car.

The safest method of going down an ordinary steep hill slowly is to allow the emergency brake to drag slightly, and also use the service brake. On very

ordinary steep hill slowly is to allow the emergency brake to drag slightly, and also use the service brake. On very steep hills throw off the ignition, put the car into low gear, and the engine will act as a brake. If this is not enough, use the emergency brake just enough to control the descent.

Explaining Sleeve Valve

THE sleeve-valve type of motor has been used for some time on expensive automobiles because of its quiet action, and has only of late been used on medium-priced cars. The construction in no way changes the principle of the automobile motor. Sleeve valves simply provide a different means of controlling the intake of fresh gas to the explosion the intake of fresh gas to the explosion chamber and the exhaust of "dead" gas from it.

cast iron which slide up and down between the cylinder wall and the piston. There are two of these sleeves in each cylinder, one working within the other. The fresh gas is admitted and dead gas expelled through openings in the sleeves. As the sleeves slide up and down, these openings come together and form ports

through which the gas has free passage.

The sleeves are raised and lowered by connecting rods from an eccentric shaft which in turn is operated by the crankshaft in about the same manner that the eccentric shaft is operated in a poppet-valve motor. The sleeves move only a short distance, in most cases less than one inch. There are no cams or springs, and the valves seldom, if ever, require adjustment.

The sleeve-valve type of motor is said to be immune from the disadvantages of carbon deposit, for the carbon acts as a lubricant to the sliding surfaces of the sleeves. There are no intricate small parts to wear and get out of or-der. Any number of cylinders may be

This type of motor may have either battery or magneto ignition, and the cooling system may be either thermosyphon or pump cooling, being in this respect no different from other styles of motors.

Auto Registration

THE CAR AHEAD A Hudson Super-Six

When you buy a car in the Hudson class you buy that car to keep. So the question is a big one. What that car is or isn't matters much for years and years. Let us look facts in the face.

Always the Master

The Hudson Super-Six, under every condition, will or can be "The Car Ahead."

No other stock car ever went so fast. None ever went so far in one day. None ever climbed such hills on high gear. And none ever picked up so quickly.

Those are facts based on official tests. And no car built can successfully dispute them.

So the Super-Six owner, in traffic or on highways, on hills or on levels, feels himself the master of the road.

Why You Should Care

We hear men say, "Well, I don't care. I don't want speed. Idon't need that power."

But you do want-don't you?-the best car in your class, when you pay about the price that gets it.

Let the extra capacity remain latent

capacity. Keep the speed and the power in reserve.

You can out-distance your rivals without going faster, because of the quickpick-up. In traffic and in hill-climbing you have less change of gears. Everywhere you get effortless performance. And you rarely tax the motor to half its capacity. That means long life and economy.

Phaeton, 7-passenger . \$1475

Roadster, 2-passenger . 1475

Cabriolet, 3-passenger . 1775

80% More Efficiency

The Super-Six invention—patented by Hudson-has added 80 per cent to this motor's efficiency. It does this by reducing vibration, the cause of motor friction. So it adds just as much to motor smoothness. And it adds just as much to endurance.

Our radical tests—like those cited below -seem to prove that the Super-Six doubles endurance.

The motor is the heart of your car, and the life of it. The leaders of motordom have always led on motors. Why should any man buy a fine car now without demanding that motor supremacy?

14,000 Now Running

More than 14,000 Hudson Super-Sixes

are now in the hands of owners. You can anywhere learn how men like them. Parts are ordered or on hand for 31,000 more. So there will be no change in the Super-Six so far as we can see ahead.

By quadrupling our output we are now, for the first time, keeping close to the demand. So fine car buyers can now get the car they want.

No Feats Like These Ever Before Performed

All made under A. A. A. supervision by a certified stock car or stock chassis, and excelling all former stock cars in these tests.

100 miles in 80 min., 21.4 sec., averaging 74.67 miles per hour for a 7-passenger touring car with driver and passenger.

75.69 miles in one hour with driver and passenger in a 7-passenger touring car.

Standing start to 50 miles an hour in 16.2 sec.

One mile at the rate of 102.53 miles per

1819 miles in 24 hours at average speed of 75.8 miles per hour.

Also fastest time up world's highest highway to summit of Pike's Peak—against 20 contest-ants—with Hudson Super-Six Special.



Touring Sedan . . . \$2000 Limousine 2750 (All Prices f. o. b. Detroit)

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Direct to You

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The man whose wife, or the woman whose husband, has been brought back to health and strength by a pure food is not apt to forget.

"It sometimes amuses me," writes a lady, "that no matter what I send to the store for or what may be forgotten my husband never forgets to supply us with Grape-Nuts promptly.

"About a year ago when I began using the food I was so run down and miserable that it was all I could possibly do to struggle through my day's household duties. I had lost my appetite and could scarcely eat food sufficient to furnish me with strength to keep up.

"In a very short time after I com-menced eating Grape-Nuts I began to get stronger and the improvement has been so steady and marked that my health is now better than for many years past.

"I do all of my own housework, am never without Grape-Nuts food, and can-not say enough in its praise." Name furnished by Postum Co., Battle Creek, Mich.

Practically all cases of stomach trouble come from the use of improper food. Where this improper food is left off and Grape-Nuts is used the results are so beneficial and the change so rapid that many people look upon it as wonderful. Nothing wonderful about it; just following Nature. "There's a Reason."

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Reduces Strained, Puffy Ankles, Lymphangitis, Poll Evil, Fistula, Boils, Swellings; Stops Lameness and allays pain. Heals Sores, Cuts, Brulses, Boot Chafes. It is an ANTISEPTIC AND GERMICIDE [NON-POISONOUS]

Does not blister or remove the hair and horse can be worked. Pleasant to use. \$2.00 a bottle, delivered. Describe your case for special instructions and Book 5 K free.

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Raise Your Calves on Blatchford's Calf Meal and Sell the Milk

More calves have been raised on Blatchford's Calf Meal than on all other milk substitutes combined.

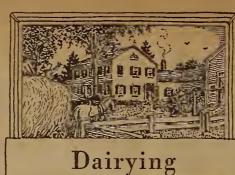
100 lbs. makes 100 gallons of milk substitute, costing only one-third as much as milk.

Prevents scouring and insures the early maturity of sleek, handsome calves.

It is steam-cooked and no trouble to pre-

Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or Blatchford Calf Meal Factory, Dept. 3 Waukegan, Ill.

It is to your interest to mention Farm and Fireside in answering advertisements.



Cheese for Market By R. Robinson

DAIRYMEN, and farmers generally who keep cows, are continually asking the question, "What is the best and most profitable way to dispose of our milk?" The answer must be given in part by asking another question, "Where is your farm located?" Location has everything to do with making a decision.

If you live within easy reach of a city where there is a market for milk, or if you are near a creamery that pays satisfactory prices, your question is easily answered. Sell the raw products and thus save the labor of converting

them into manufactured dairy products. But suppose your farm is 20 miles or more from a good market town, with the roads in none too good condition. Many thousands of good farmers with first-class farms are more or less isolated, and to such the manufacture of cheese offers advantages even though there is a creamery at such a distance that you can deliver cream two or three times a week. Let me describe what happens to your cream in such a section if you send it to a creamery that has neither ice nor cold storage, and which usually churns twice a week, using cream that is delivered only about twice a week.

Such cream is seldom in a condition to make first-class butter. When the butter is shipped perhaps once a week, it starts out from a warm room. Then when it reaches the station the butter may have to wait for a train several hours, and on arrival at destination it will probably lie over till the next day while the agent sends a card through the mails notifying the consignee that so many boxes of butter are being "held at his risk until called for.

By this time the butter cannot be sold for the same price as fresh butter made from cream delivered and churned every day and kept cool from the moment it was wrapped until delivered to grocers from an iced wagon. I am simply describing a common occurrence which any farmer furnishing cream under such conditions may prove for himself. I have seen too much of it for the farmers' good since the days of cold storage as well as before, and the loss always comes out of the patron who furnishes cream.

If you try to make butter on the farm; you have the same marketing conditions or worse to contend with. I have in mind a farmer in Ontario who lived 30 miles from town. He used to bring his butter to me for several years, usually packing it in tubs. His wife was a splendid buttermaker. But in competition with others living from a

Buyers Will Find You

However, it was the only thing the man could do with his milk, as there was no market for cheese except those weighing about 80 pounds each, which could not be produced from a few cows on an isolated farm. I will now shift the scene 3,000 miles west to tidewater, on the coast of Oregon. A family living at Sand Lake, 17 miles from a shipping point, tried making butter which had to be hauled that distance over rough and sometimes almost impassable roads. The round trip took two days, and the load of butter was usually worth from \$15 to \$20. Then it had to wait at the dock for an only boat without a time schedule to take it 160 miles to Portland, a two days' trip, counting delays for tides. The returns were disappoint-

Finally this same family decided to try cheesemaking from their 20 cows, so they went to work and split cedar shakes about four feet long, with which they built a shack 10x15 feet. There was not a sawed board in the house except two small window sashes. Even the door was made of split cedar.

The youngest son, a lad of eighteen at this time, picked up a slight knowledge of cheesemaking and went ahead. He had been making it for about a year when I heard of his efforts and went over to buy some of his cheese. While

of cheese at one trip. In a very few years this family was buying city lots in Portland, though they produced nothing to sell except cheese.

While cheesemaking is an art that calls for unlimited judgment and the use of all five senses if a prize article is to be made, an intelligent study and is to be made, an intelligent study and application of instructions will enable any careful person to make a good, salable cheese that will bring good prices in local markets. And no matter where you are located, there is a market for cheese of anything like fair quality at a reasonable distance, usually in your home town. Then, too, the cheese will keep and be improving in quality while you are waiting for a convenient time at which to Some dairymen have the mistaken idea that a big outlay is necessary to assemble a cheesemaking plant on the farm. The fact is, a very few dollars will do in many cases. Some kind of heating apparatus is needed; a small steam boiler is best. Then you will need a self-heating vat. A vat suitable in size to hold your night and morning's milk

dinner was being prepared I had a talk with him, and found the boy more hun-

market and have also bought and sold

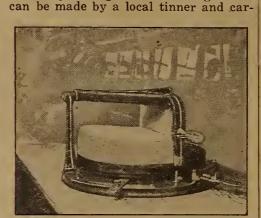
cheese for many years more, but I have

never seen better stock than that boy turned out in his little cabin built of

shakes. Instead of \$15 or \$20 worth of

butter he often brought me \$125 worth

gry for information than for dinner. He seemed literally to swallow every word of my instructions. Now, during half a lifetime I have made cheese for



Flats are preferred because they fit grocers' cheese-cutting machines

penter. A handy man can make the jacket, which is simply a water-tight box for the tin vat to set in. This vat is on the same principle as a house-wife's double boiler. It warms the milk

without burning it.

For quantities of milk up to 200 pounds a day small vats heated with a kerosene lamp attachment will do.

You can make a rack for draining curd by nailing lath to the narrow edge of 1x2 crosspieces, spacing the lath half an inch apart. Make a water-tight box about the size of your vat, and six oreight inches deep. Mount it on legs at a convenient height and you have what is called a sink. Cut the rack to fit into this easily, with the crosspieces resting on the bottom. Cut a V in the crosspieces to let the whey drain off, and hore a hole in one corner of the sink to bore a hole in one corner of the sink to let the whey run out.

A satisfactory press for any quantity of milk up to 1,000 pounds a day is a common cider mill with two screws. You can buy the hoops and followers. mile to five miles out who brought but-ter once or twice a week her butter Hoops are the molds which hold the could not be sold for the same price, curd while being pressed into cheese, and the follower is the lid that presses hoop.

> Sometimes a good second-hand cheese ss can pe secured at When new they cost about \$100. Fourteen-inch hoops with followers cost about \$3.50. Curd knives cost about \$3 each, and a tested thermometer costs about 75 cents. A measuring glass is necessary for measuring rennet and coloring. A square flat-bottomed tin scoop comes handy for lifting the last pieces of curd out of the vat. Those are about all the utensils required. You may select what will answer for your particular case.

For supplies you must have rennet extract, coloring, good salt, circular cloth for bandages, and some cloth circles to press on the cheese. The size of cheese will depend on the amount of milk you have. Two common sizes are those known as Flats and Young Americas. A Flat, made in a 14-inch hoop, fits the grocer's cutting machine best, and is preferred on that account. They weigh from 22 to 25 pounds, and require about 240 pounds, or 30 gallons, of milk each. of milk each.
Young Americas are about 5½ inches

in diameter, weigh 6 to 8 pounds, and require 60 to 80 pounds of milk each. You may count about 10 pounds of cheese to 100 pounds of milk.

NOTE: Directions for making American cheese will be published in an early issue of FARM AND FIRESIDE.

AMERICAN PRODUCTS CO., 7984 3rd St., Cincinnati, O. (Sold with or without elevator)
Crush ear corn (with or without shucks) and grind all kinds of small grain. Haveconical-shaped grinders. Different from all others. Handlest to operate and Lightest Running (Our circular tells why)
Ten stzes, 2 to 25-horsepower.
FREE Folder on "Feeds and Manures."

J. P. BOWSHER CO... South B THE TALE OF little story. It's highly in-teresting, free and is worth money to you. Also get particulars about the wide-HEESEN FEED COOKER Handiest Article On The Farm
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Learn how 55000 farmers ere making Bigger Profits, Cutting Feed Cost and Avoiding Disease
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Easy to operate. Perfectly safe. No wicks to trim. Fill it once a week and clean it once a year.

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Can't spill or explode, If a cow kicks it over, simply set it up again. Storm proof, bug proof and fool proof. See one at your dealers or write usdirect for catalog. Dealers and Ag'ts wanted.

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"A friend advised me to quit coffee and use Postum—said it helped him. Since taking his advice I retain my food and get all the good out of it, and don't have those awful hungry spells.

"I changed from coffee to Postum without any trouble whatever, felt better from the first day I drank it. I am well now and give credit to Postum." Name given by Postum Co., Battle Creek, Mich.

Postum comes in two forms:

Postum Cereal-the original formmust be well boiled. 15c and 25c pkgs.

Instant Postum-a soluble powderdissolves quickly in a cup of hot water, and, with cream and sugar, makes a delicious beverage instantly. 30c and 50c

Both forms are equally delicious and cost about the same per cup.

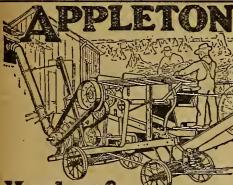
"There's a Reason" for Postum. -sold by Grocers.



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Learn how to change your straw pile into Gold; how spreading straw, like spreadmanure, is the most paying thing a straw owner can do. Increase your crop profits \$5 or more an acre. My Free Book— "Spreading Straw Pays" tells all about my new improved PERFECTION Straw Spreader. Always a good machine, but now, after three years of success, better than ever. Sold on 60 days' trial. Fully guaranteed. A postal brings my Book. C. E. WARNER, Pres., THE UNION FOUNDRY & MACHINE COMPANY.

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Husker &

Four sizes for engines of four h. p. and up.

The most economical, efficient way to save all the feed value of corn is to husk the ears and make fodder of leaves and stalks. Appleton was first successful husker made. Husks cleanest, shells least; has most efficient corn saver. Cuts or shreds stalks and leaves while husking ears—fodder value saved from small acreage pays its cost. Guaranteed to do more work with less power than any husker of equal size. Simple strong parts; few repairs, long life, sure dependability. Easiest, safest to operate. Works in all conditions of corn.

Write for Free Husker Book. Appleton Mfg. Co., 509 Fargo St., Batavia, Ill.



Destroy Smuts

Cleanse all seed grains with Formaldehyde solution before planting as it positively destroys smuts, of wheat, oats, barley, rye, etc. It prevents scab and black-leg diseases of potatoes, also cucumber and onion rot and cabbage diseases, etc.

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Every farmer who is in business for big profits should use Formaldehyde, as it has the approval of the U.S. Dept. of Agriculture. Formaldehyde at your dealer, one pint 35 cents treats 40 bushels of seed. Our new Hand Book is free write to-day.

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Combination Ice House

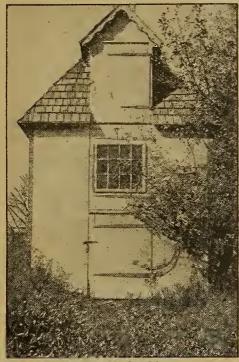
By A. L. Roat

THIS ice house, built something over a dozen years ago, answers the double purpose of furnishing a supply of ice for dairy and other farm purposes and cold storage for keeping perishable food products and supplies in good condition to be delivered to city customers.

A four-inch air-space insulation was provided between the tight inside and outside walls. The roof construction allows plenty of air insulation above the ice, and contains a ventilator that can be controlled to suit the weather conditions.

Under this house is a cellar six feet deep, three feet of which was filled with rock of all sizes to furnish drainage. About one foot of dirt was tamped over the rock. Three feet of dirt was banked around the concrete foundation to carry off water from the roof.

Generous layers of sawdust insulate the bottom, sides, and top of the ice. This keeps out the heat.



Supplies ice and cold storage

The upper door is used for completing the filling of the house with ice and for removing ice when the house is full.

Feeding Grain with Grass

ACCORDING to a Missouri experi-ment, a cow producing the equiva-lent of a pound of butter a day or less needs no grain if pasturage is good. But if she produces more milk than that, grain feeding will add to the profit.

To a cow giving the equivalent of a pound and a half of milk daily, give five pounds of grain, and to the two-pound cow give eight pounds of grain. As pastures fail in late summer, give grain or silage to cows that show a falling off in milk production.

Lost People

HARVEY G. ROGERS, last heard from in Heppner, Morrow County, Oregon, in July, 1904, is six feet three inches tall, weighs 170 pounds, and limps on right leg. Write to his sister, Mrs. Ethel Gordon, Jefferson, Oregon.

CLARENCE HUYSER left his home in Zeeland, Michigan, six years ago. Age twenty-six, weight 130 pounds, height six feet. Was last heard from a year ago in Hast-ings, Minnesota. Write to his mother Mrs. C. Huyser, R. F. D. 2, Zeeland, Michigan.

A. D. WELLONS (also called Dayton Wellons), now about thirty-eight years old, was last heard from twelve years ago in Idaho. Write to his sister, Mrs. M. Pearl Kelly, Booneville, Iowa.

JOHN SIETAM moved from Gladbrook, Iowa, twenty years ago to Lake Park, Iowa, but has since moved from there and is a lost person. He is fifty years old, height five feet three inches. If anyone knows a man by that name and will write me, I will gladly return postage. Mrs. Louis Althof, R. F. D. 6, New Hampton, Iowa.

WILLARD A. FAY, light complexion, light hair, false teeth, left home seventeen years ago, and has not been heard from since. Anyone knowing of him is urged to write Mrs. E. J. Fay, R. F. D. 1, Boulder, Colorado

I SHOULD like to find the children of Jacob, John, David, Barbara, and Susan Hidlebough, whose father's name was Jacob Hidlebough. They lived in Brushcreek Township, Fairfield County, Ohio, but I do not know the town. Please write Mrs. A. E. Hidlebough, Box 161, Morton, Illinois.

E. E. COLIEN of Manawa, Wisconsin, would like to locate either of his relatives, Joseph Dumas, Henry Dumas, or Mrs. Mary Cleveland, née Dumas. These sole near relatives resided somewhere on the Pacific Coast when last heard from. Ad-

If you keep cows you ought to write for this book

*HIS book was written for the man with only two cows just as much as for the man with twenty. In it has been gathered together a great fund of valuable information on subjects which are of vital interest to every cow owner. And while the various phases of dairying are treated by the best and

highest authorities, it is not a technical treatise but is written in plain every-day language so that even the children can understand it. Here are just a few topics that will give you an idea of the practi-

cal nature of its contents:

"How a Dairyman Made Good"a real story of a real farmer, who, starting with almost nothing, built up a fine dairy herd and made a big success.

'Year Around Feeding of Dairy Cows''—by an authority whose advice is well worth heeding. The importance of proper feeding deserves more attention from every cow owner.

"How to Judge a Dairy Cow"shows by illustrations what points to look for in a dairy producer-explains the essential qualifications of a good dairy cow.

"Building Up a Dairy Herd" a practical breeder gives some sound advice on this important subject.

"The Farm That Won't Wear Out" -shows that the farm where cows are kept, and the fertility returned to the soil, improves instead of deteriorates.

"The Care of Cream on the Farm" —quality is as important as quantity. It costs little and brings big returns.

"Silos and Silage"—one of the best chapters in the book. Full of silage facts that every farmer ought to know.

Then there are splendid articles on "Alfalfa," "Ventilation of Dairy Barns," "Breeds of Dairy Cattle," "Improving the Herd with a Good Bull," "Care of Freshening Cows," "How to Test Cows," etc. Numerous dairy rations, suitable for various sections of the country, are given, and various milk and dairy tables as well as tables of weights and measures, silo capacities, etc., that every farmer has occasion, at some time or other, to refer to.

Thousands of dollars have been spent in the preparation of this book, and if you keep cows you certainly ought to write for a copy and read it from cover to cover. The book is absolutely free. Just fill out the coupon or send the information requested on a post card, mentioning this paper.

The De Laval Separator Co., 165 Broadway, New York

I sell cream, make butter, sell milk (cross out whichever you don't do). The make of my

Please mail me, postage free, a copy of your New Dairy Handbook. I keep

"Selecting and Developing the Jersey Herd"



is the title of an interesting booklet by Prof. Hugh G. Van Pelt. Describes the five essentials of a successful dairy cow. Explains how to develop the milk producing qualities and increase the vigor of the heifer calf. Write for this booklet today. It's free.

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Ask your dealer to show you "HOOSIER" Stoves and Ranges. Write for our big free book showing photographs describing large assortment of sizes and designs of cast and steel ranges, cast cooks, soft and hard coal heaters and base burners to select from explaining our free trial offer. Send postal today. Write name and address plainly. No obligations.

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ming Device, Rust Proof and Easily Cleaned — Low Down Tank — Oil Bathed Bail Bearnings — Easy Turnings — Easy Turning — Sanitary Frame—Open Milk and Cream Spouts.

Albaugh-Dover Co., 2139 Marshall Blvd., Chicago, Ill.



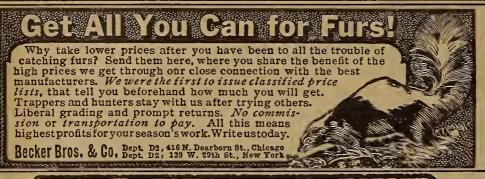
Egg-o-hatch applied to eggs during incubation strengthens the chick and weakens the shell. 50 test hatches show average of

96% for Egg-o-hatch eggs and 81% for eggs not treated, right in same machine. Last five summer comparison hatches average 95% and 67%. Send 5 cents for sample, enough for 50 eggs. Full size package, enough for 600 eggs, 50 cents, postpaid.

Geo. H. Lee Co., 214 Lee Bldg., Omaha, Neb.

Mfr. Lee's Lice Killer, Germozone, Egg-o-latum, etc.

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The Most Sensible Collar On the Market—The Safest

This collar is safe to use because it cannot cause boils, galls, scalds, sweeny or any other collar injury. It is the most sensible because it can be fitted instantly to any horse. It's simple, merely the ordinary collar made easily adjustable. If you want to save time, money

FITZALL Adjustable Collars. Sold by dealers for \$2.50 up. If yours can't supply you, we ship prepaid. Write for valuable collar information, how to save the horse, FREE. Write today.

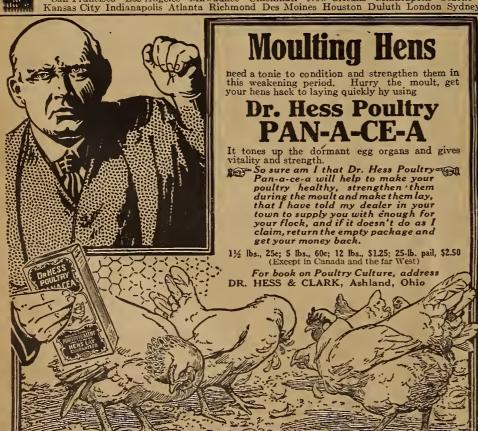
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Sulphur for Chicken Pox

By J. T. Raymond

AN ESSEX COUNTY, Massachusetts, poultryman, as progressive and successful as any I know in the business, told me the other day of an unfailing cure for chicken pox which he accidentally learned last fall, and which has since cleaned up over 50 flocks within his observation, in no instance hands being laid on the hens. "Last fall," he narrated, "one of my day-old-chick customers telephoned me

day-old-chick customers that her hens were all used up. There were eruptions on their heads; the eyes entirely closed. I knew

were eruptions on their heads; the eyes of some were entirely closed. I knew right off it was chicken pox. She asked for advice. I said, 'Kill them, or sell them, if you can, to one of those foreigners who go around buying poultry.' "You see, I have been right after chicken pox for years now. I have had 1,500 to 2,000 head of hens a year, and chicken pox was bound to break out once in a while. Working on the theory that a germ caused the disease, I disinfected and disinfected. Once I hired a poultry authority to come here, and a poultry authority to come here, and paid him \$20. He squinted and squinted, but that was all the good it

did. I still had chicken pox to contend with every once in a while.

"Well, within ten days this lady called me up to tell some wonderful news. She said a Hebrew buyer had called, had agreed to take the hens if she would cure them first, and had left directions for the cure. And now the

directions for the cure. And now the flock was all cured and waiting for him.

"The cure was sulphur—piles of it.

"Take 10 pounds of sulphur and mix it with 90 pounds of your regular dry mash. Feed that mash to the hens for three days running. Make them eat all of it if they will. Then omit the sulphur for three days. Then, if they still have the disease, repeat the three-day treatment. If any have symptoms of chicken pox after three additional days, then something else is the matter with them. Very few will require the second three-day diet. They recover with miraculous day diet. They recover with miraculous

speed.
"It isn't necessary to touch the hens.
You don't have to wash the affected parts with potassium-permanganate soparts with potassium-permanganate solution, or paint them with iodine. I have tried this plain sulphur cure thoroughly myself, have watched it applied in dozens of other flocks, and it has never once failed. It proves to my entire satisfaction that chicken pox in poultry is strictly a blood disorder caused by too high living.

"I spoke about the treatment recently

"I spoke about the treatment recently to a college poultryman. 'Doesn't that amount of sulphur physic them?' he asked. Certainly it does. But it cleans their blood, and no harm is done."

A Handy Little Hopper By A. L. Roat

FOR breeding pens and colony flocks I of limited size I have got best results from metal feed hoppers. These hoppers, as a rule, hang against the side

walls of my houses, with a platform be-



low them at the proper height for the birds to stand on when eating from the hopper. These hoppers have a screen-wire front with meshes large enough so that the birds can reach the mash but

cannot get their feet into the feed. The meshes vary in size according to the age of the birds to be fed from them.

A narrow trough in front of the hopper catches any feed that may be hooked out while the birds are eating. The filling is done at the top and there is a metal cover that closes the hopper safely from rats and mice during the night. These hoppers are sold at \$1 each for the eight-quart size, and 90 cents for the four-quart size, by dealers.

IT IS well to remember that rapidly growing young turkeys cannot successfully digest large quantities of green corn or corn that has not fully dried out after maturing. The new corn at the roasting-ear stage and a little older is so attractive to the young turkeys that they will eat about double the amount that they can successfully digest. The result is liver trouble caused by indigestion and the unnecessary death of many young turkeys every fall.



STONEWARE gallon crocks, like the one shown in this picture, are used by E. B. Shaw for dry mash in his breeding and laying pens, each jar having a follow-up wire grid, slightly smaller in diameter than the size of the crock. As the dry mash is eaten the wire grid follows down and prevents the bird from hooking out the mash.

Testing Hens' Appetites

CHICKEN'S palate is not generally A CHICKEN'S palate is not generally considered very keen, but it has been shown that hens' likes and dislikes of food are nevertheless quite marked.

The Missouri Experiment Station recently weighed amounts of various feeds which were placed before the hens, and what they left of each kind of feed was weighed back after a certain time. This gave direct evidence of which kinds of feed suited the hens best. Tests show that the hen knows better than many people how to select food that will help her most in laying eggs and keep her in the best condition. This test showed that some of the old ideas in regard to feeding poultry were This test showed that some of the old ideas in regard to feeding poultry were sound, and some others were discredited by the hens. It was found that wheat is very generally preferred to all other kinds of grain. Kafir stood next in popularity, followed by corn and corn meal. Oats and sunflower seeds were not eaten in as large quantities as many not eaten in as large quantities as many people would have expected. It was found that the hens nearly always cracked the sunflower seeds before eating them. Bran was refused by nearly all of the hens when they could get other kinds of feed. Alfalfa leaves were not eaten in large quantities when

were not eaten in large quantities when plenty of grain feed was available.

This test showed that beef scraps were eaten in not much larger quantity when hens were laying than when they were loafing, but other experiments made by this station have proved that when hens are compelled to eat a reasonable amount of sour milk or beef scraps the egg record is at least twice as high as when no animal food is fed. The sour milk was found to be rather more valuable than beef scraps for increasing egg production. creasing egg production.

Double-Deck Poultry House

By Frank Orr

I BUILT one of my poultry houses with a second story, and I am pleased with the results. I use the upper floor to house the very early young chicks till they can go on range in April or May. I cover the upper floor with soil mixed with sand in the fall, and this soil litter dries thoroughly before the chicks are hatched. The upper room contains windows which admit sunlight and air in abundance. After the youngsters are turned outside, the upper floor is given to the hens. They use it also before the chicks arrive for a laying and scratching room. Some hens prefer and scratching room. Some hens prefer to be up-stairs, and I thus accommodate them. Each bird has its individuality, them. Each bird has its individuality, and I humor their preferences. The addition of the second story adds comparatively but little to the building cost. A stairway connects the two floors.

Good Health Talks

By DR. DAVID E. SPAHR



SEVERAL sub-scribers have asked that I give a description of the nature of pellagra. Although not a new disease, it is now demanding much attention. The name pellagra comes from pellis (skin) and Agra

(catching, seizure, or rough). The dis-was first recognized in Italy in 1728. The name pellagra was given it in 1771. It is most common in semi-tropical zones. More persons in middle life have it than at any other age. It occurs twice as frequently in males, except in children. Whites are three or four times as liable to have it as negroes

very poor hygienic surroundings and crowded conditions especially favor its development. The maize theory of the cause of the disease has now been abandoned, as persons now have it that do not eat corn. The sand fly, the flea, the bedbug, and other insects have been charged with being responsible for the disease. A single, or what is called a monotonous, diet has also been charged with causing nellagra

with causing pellagra.

After all has been said and done, it would seem that debility and poor dietary have a great deal to do in causing the disease.

Pellagra is not, in all probability, contagious or hereditary. No physician, nurse, or attendant has ever been reported as contracting the disease, out-side or inside of an institution, from attending a patient.

There are three forms of the disease—the acute or fulminating form, the chronic form, and the insidious

In the acute form death occurs in probably 50 per cent of the cases. In the chronic cases the disease recurs year after year. In the third class there are gastro-intestinal disturbances such as diarrhea, appendicitis, gall-bladder disturbances, gastric ulcer, and infection.

The general symptoms of pellagra include malaise, debility, loss of weight and anæmia. The cutaneous symptoms usually follow the gastro-intestinal, immediately or after considerable time. The common sites of these lesions are on the backs of the hands, the forearms, the forehead, and the back of the neck, and the dorsum of the feet. The scalp is not infected. The lesions are always symmetrical. The symptomatic treatment is of little avail. The treatment consists in looking after the hygienic surroundings the proper dicting of the surroundings, the proper dieting of the patient, and the medicinal measures.

Sugar in Urine

My son, aged twenty-eight, applied for insurance and the examining physician found sugar in his urine, otherwise he was in good health. He cannot tell whether he has diabetes or not; must await developments.

H. L., Washington.

YOUR physician is perfectly right. Time will tell whether it is due to indigestion or the overingestion of highly saccharine or amylaceous foods. Sugar in the urine of young people is always a serious condition.

Thin and Pale

T. F. M., Kentucky, says she is so ana thin that she looks like an invalid, but she has never been sick a day in her life. Does not tire her to work all day. She lives on a farm and has plenty of fresh air and exercise. Has tried patent medicines, but they have not increased her weight a pound.

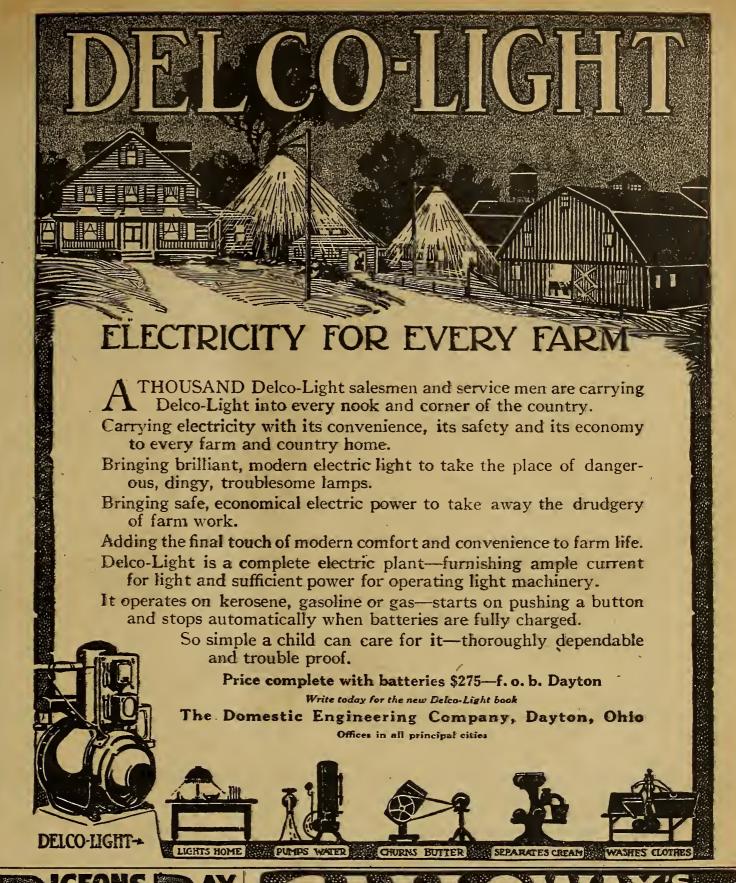
DON'T worry. Leave well enough alone. If you are well, that is the important thing. That is your normal condition. Fat women are quite often sick and complaining, and you can outwork and sleep better than four of them. If you are too pale, take a glass of fresh milk every three hours, or a tablespoonful of pepto-mangan (Gude) in a half glass of milk after meals.

Pain in Side

Have had a pain in my side just above the waistline occasionally; also have fever and chills at night, ending in a sweat. Can't stand close air, as I am short of breath, and it nauseates me. If I take quinine I itch awfully, especially my feet and hands.

Mrs. B. W. T., Montana.

Your rigors and sweats may come from an inflammation of the gall bladder. Take a teaspoonful of chionanthus compound before breakfast. You should have your heart examined.







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Hearts and Hazards

A Love Affair and a Business Deal Get Entangled

By EDWIN BAIRD

PART I

EN ABBOTT came home from work somewhat earlier than usual on that July day, and anybody might have seen his mind was not at rest. He was, in fact, so preoccupied that he failed to acknowledge the greeting of his dog, Nestor, a Newfoundland of notable intelligence, who remaded investigation to the grate.

Nestor, a Newfoundland of notable intelligence, who romped joyously to the gate.

Ben walked around the house to the garden at the rear, and stood for a moment, straw hat in hand, gazing thoughtfully at the well-kept beds of flowers and vegetables, now in their prime. Here was epitomized, in a small way, Ben's innate love for the soil; but on this evening, perhaps for the first time, no light leapt to his eye as he beheld his handiwork. In an absent-minded way, he plucked a cluster of gorgeous nasturtiums, blooming near the walk, then entered the kitchen, where his mother was preparing supper.

supper.
"Where's Lucy?" he asked, pinning the bouquet to

Mrs. Abbott smiled at him apologetically.

"She just ran over to see Angela McLennan. She—"

"She ought to stay here," he interrupted, "and help you once in a while. She's not home half the time

His mother, inserting a pan of biscuits in the oven, smiled at him over her shoulder in gentle protest, her face flushed rosily from the heat. She spoke, but was

again interrupted.

"I don't like it," he said. "It's not fair to you."

And then, deaf to her expostulation, he threw off his coat, rolled up his shirt sleeves, and helped her in the

And then, deaf to her expostulation, he threw off his coat, rolled up his shirt sleeves, and helped her in the kitchen till supper was placed on the table.

As they sat down, Lucy telephoned. She would not be home for supper, she said, but would dine, instead, with the McLennans.

Returning from the telephone Ben continued his meal in a moody silence. But his mother, watching him with thoughtful eyes, saw that something besides his sister's absence accounted for his depressed abstraction. Later, when they sat together on the front porch in the midsummer dusk, he confirmed this belief by telling her what was really troubling him: His employer, Frank Sage, a Peoria produce dealer, had been approached to-day, it seemed, by a man known as Presley Henkel, who was trying to interest Sage in a "chemical discovery which would reduce the cost of gasoline to one cent a gallon." Ben knew the man. Two years before, while visiting Chicago, an oily-tongued individual had attempted to inveigle him into a confidence game. Ben, who was nobody's fool, had tried to shake the fellow off, but, this proving difficult, a policeman was called and the crook was arrested.

"That crook," concluded Ben, "and this man calling himself Henkel are one and the same person. And now the question I'm trying to answer is this: Shall I tell Mr. Sage what I know about this pennya-a-gallon fellow, or just keep still and let matters take their course? What do you advise, Mother?"

She looked at him through the fading light, one hand resting on the head of the Newfoundland, who lay beside her chair.

"I think, Ben, you will have table see your beauty to the ear.

chair.
"I think, Ben, you will have to do as your heart dictates. I have always believed—and you have, too, I'm sure—that an informer must be a pretty mean person. But doesn't this particular case alter things a lit-

He nodded silently. Like many men of powerful physique and steady nerve, he was not a rapid thinker, although a methodical one. He mentally revolved the problem in his slow, de-liberate way, and was unable to reach an im-

mediate decision. His mother, still watching him, was reminded of something she had often meant to ask, and now, the time appearing

now, the time appearing propitious, she uttered it for the first time:
"Ben, haven't you asked Gertrude Sage to marry you yet?"
He continued to gaze

into the shadowy yard, and a small silence fol-

lowed.
"No," he murmured at last, almost in a whisper. Then, abruptly, he began talking in what, for him, was a hurried voice: "If Mr. Sage had only consulted me, the thing wouldn't be so hard. But he didn't, and I hardly know what to do. If I go to him voluntarily and tell him Henkel is a grafter, it'll look malicious, won't it? And of course Henkel will say he never saw me in his life—and, after all, I can't prove he's a grafter."

"Your word should be enough," said Mrs. Abbott.
"Ben, why haven't you asked her?"

"Because," answered Ben, "I know she wouldn't have me."

"But how can you tell, unless—"

have me."

"But how can you tell, unless—"

"Well, maybe it's just because I haven't any gumption. Anyway," he added, clearly not cheered by the change of topic, "that hasn't anything to do with this. Can't you tell me what I'd better do about it?"

"Suppose," said she, "you look at it from Mr. Sage's viewpoint. Suppose you were dealing with a man whom Mr. Sage knew to be a scoundrel, and suppose Mr. Sage knew of the transaction, would you ever forgive him—Mr. Sage, I mean—for failing to warn you?"

warn you?"

"No, I don't believe I would. In fact, I know I wouldn't. Mother, you've solved it. I'll see him tonight."

Hence, as soon as his sister returned, he got his hat and set forth in the direction of the Sages' home. But as he walked on through the warm summer night, beneath the starry sky, his mind was occupied, not with Sage, but with Sage's lovely daughter, Gertrude

THE Sage home, a big house of red brick and white stucco, stood in superb eminence on one of Peoria's many hills. Drawing near, Ben beheld, in the street below, the head lamps of a motor car, which advertised the presence of a guest. With a touch of dismay he turned in at the gate and ascended the winding walk which led upward to the house, and this feeling waxed stronger still when he came within sight of the broad veranda. Thereon sat the girl who had been uppermost in his thoughts for the last twenty minutes, and beside her sat the man against whom he had come to caution her father. . . . "Mr. Abbott, have you met Mr. Henkel?"

Ben nodded briefly to the other man, who had risen from his chair with easy cordiality.

"We saw each other at the store to-day." And he thought of adding, "We also met in Chicago once," but he held his tongue.

"Mr. Henkel," continued Gertrude, who evidently felt it incumbent upon her to keep the conversation going, "has invented a marvelous compound for making gasoline. It's really quite wonderful. Just think—gasoline at one cent a gallon! At that rate, everybody could afford to keep a motor. Do tell him about it, won't you, Mr. Henkel?"

Henkel smiled at her, as if in good-natured protest. "It's not quite an accomplished fact, you know. But I have the formula, and with sufficient capital—" He broke off to address Ben, who stood at the top of the veranda steps, a tall, silent figure in the moon-

light.

"Are you interested in gasoline, Mr. Abbott?"

"Yes," said Ben quietly.

THERE was, somehow, a certain significance in the monosyllable, but if Henkel noticed it he gave no sign. He spoke well and entertainingly of his "great discovery," withal modestly, too. He seemed at some pains to convince his hearers that he was concerned not so much with the fame and fortune, which presently would accrue to him, as with the tremendous benefit his "discovery" would confer on mankind. He was a rather handsome young man of the blond type, inferior to Ben in physical build, though better dressed and more polished in manner.

Ben, leaning ungracefully against the veranda railing, with nothing to say, with his ears reddening and conscious of it, felt suddenly big and awkward and ungainly, and altogether uncouth; and he felt, also, that Gertrude was aware of this sharp contrast between him and the other man, and that he suffered grievously in her estimation. More compelling, however, than anything else was his smoldering anger at seeing her on terms of friendly equality with a man whom he knew to be an arrant rascal.

ever, than anything else was his smoldering anger at seeing her on terms of friendly equality with a man whom he knew to be an arrant rascal.

Her parents joined them presently, and, after an uncomfortable period, he took his departure, without having mentioned what was in his mind.

His mother was still on the porch when he returned home. Lucy was in the living-room, playing a late "rag" on the piano. He slumped into a chair, exhaling audibly. And then, for a while, the stillness of the night was unbroken save for the gentle creak of his mother's rocking-chair, the syncopated sounds that came through the open windows of the living-room, and the crickets and katydids in the moonlit yard. Finally Mrs. Abbott asked:

"Ben, did you speak to Mr. Sage?"

"No," he answered absently, contemplating the silvery night with a disconsolate gaze. After a pause: "Mother, we made a mistake in coming to Peoria. I wish we had stayed on the farm."

She knew then that his mission to-night had been unhappy as well as unsuccessful. He invariably spoke thus when especially discontented with conditions in town. Murmuring an acquiescence to what he had said, she glanced back to the time, some nine months ago, when, following her husband's death, they had rented a six-room cottage in Peoria and leased their farm to Philip Lukens, a Chicago man who had contracted the back-to-the-soil fever. This had been in direct opposition to the wishes of Ben, who, coming from a race of farmers, placed agri-

who, coming from a race of farmers, placed agri-culture head and shoulders above all other pursuits. But Lucy's desire had inclined otherwise; she had wanted to leave the farm and live in a city, preferably Chicago. Mrs. Abbott, too, had undergone a change of sentidergone a change of sentiment after her husband's death. Theretofore hap-py with country life, she had conceived a pensive dislike for_it, since her daily environment had constantly summoned memories of her departed husband. So Ben, though disinclined to leave the farm, had acceded to their desires. His one compensation, these last nine months, had been the hundred-foot garden plot which went with the Peoria place, and which, in a small measure at least, allowed an outlet for the main ambition of for the main ambition of his life—farming.

Perceiving it was his wish to say nothing of his visit to the Sages' home, she turned the talk into another channel. Ben's mind, however, once it was established in a certain groove could in a certain groove, could in a certain groove, could not easily be displaced, and at the first opportunity he began talking again of the farm.

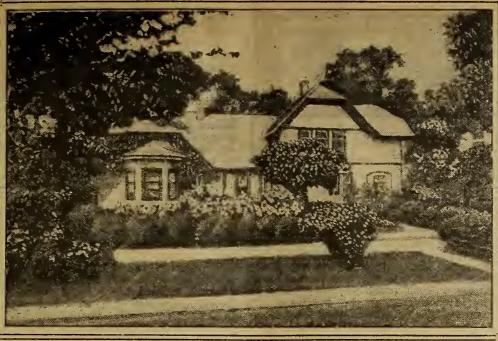
"You're still longing to go back, aren't you, Ben?" And she looked at him with a sort of wistful fondness.

"I'd go back to-night," [CONTINUED ON PAGE 29]



"Ben, haven't you asked Gertrude Sage to marry you yet?"







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Housewife's Club

Door Made Double-Acting

By Wm. E. Curley

FOR a long time my wife had been the door between the dining-room and Her objection was not to the kitchen. door itself but to the way it was hung. It was a common everyday door hung on the kitchen side of the doorway. To keep the kitchen odors out of the diningroom during the preparation of meals the door had to be closed, and in serving the meal it was necessary either to leave the door open or to open and close the door at each trip back and forth to keep the heat and smells of the kitchen out of the dining-room.

To remedy this condition I decided to To remedy this condition I decided to change the door to a double-acting door—that is, one which swings both ways. Before tackling the job I had a talk with a friend of mine who attends to the repair work on a lot of fine houses. "Quite a simple operation," said he. "Are the door jambs rabbeted, or are they plain with a separate rabbet strip for the door to close against nailed on them?"

I did not know.

I did not know.
"If plain with separate rabbet strip
nailed on, take the strip off the jambs
and the door will require little fitting. But if the jambs are rabbeted, half an inch must be ripped off each edge of the door to make it the proper width. In either case, the door should be three-eighths inch narrower and one-half inch shorter than the opening it is to be hung in. If there is a carpet strip under the door, remove it so there will be no obstruction to the door's swinging. In fitting the door, the edge that is to be hinged should be well rounded, with a diameter equal to the thickness of the door.'

I next inquired about hinges, and got he following information: There is the following information: There is first the old-style double-acting spring hinge which requires a strip on the jamb to hinge the door to. One hinge fastens near the top of the door and one near the bottom. While fairly efficient, this type of hinge is practically obsolete, having been superseded by the more modern floor hinge, of which there are three general types. First there is the spring with no neutral point. When this hinge is used it is necessary to put a heavy weight against the door to hold it open. This being the case, the door is generally closed, and when closed the spring is not strained and generally lasts a long time. Next comes the more recent hinge, so constructed that when the door is fully opened either way it will stay in that position. This is a convenient feature.

The disadvantage lies in the fact that when fully opened the spring is strained to its fullest capacity. And as, through carelessness or neglect, the door is left

in that position for hours at a time, the of camphor. Put a tack up near the top spring gradually weakens and the hinge of the piano, on the inside, and hang wears out much sooner than the first this bag on it. Mrs. F. F. J., Delaware. hinge. Either one of these hinges costs about \$1.25.

The very best hinge, however, which sells for \$2.25 at our local hardware stores, combines the advantages of both kinds, with the disadvantages of nei-ther. On each side of the hinge near the bottom is a little knob which pro-jects possibly half an inch. When you desire to leave the door open, simply press the knob down with the foot as the press the knob down with the foot as-the door is opened. Immediately the tension is taken off the spring, and the door swings as easily as the ordinary door. So it can be left open indefinitely with no strain on the hinge. The moment the door is closed, however, the spring automatically goes into place, and until the knob is again pressed down the hinge will again close the door from either side. either side.

I went to the hardware store, invested my \$2.25, and went home. That night I tackled the job. I found the jambs were rabbeted, so I had to rip that door after all. To put the hinges on, I needed only a saw, chisel, and one-inch auger. It was slow work, for I had never done a job like it before, but it was not particularly difficult. It took me just four hours to finish the job. me just four hours to finish the job.

This was a year ago, and my wife says she does not see how she did without this convenience as long as she did. The money cost was low and the time and effort expended was not great, but the result was something that lightened the labor of the woman in the house.

Household Hints

CLEANING SILVER—To clean your silver, put it in an aluminum kettle full of hot water to which has been added a tablespoonful or two each of salt and soda. This will clean the silver in a twinkling, with no rubbing or mess. Be sure the receptacle is aluminum, or the charm is gone. M. W. Y., Oregon.

TO WATER-PROOF CLOTH-A woman showed me a raincoat for which she had water-proofed the cloth, and gave me the following directions: Add one tablespoonful of powdered resin to one quart of linseed oil, and cook until the the cloth will be water-proof.

M. S., Rhode Island.

To Remove Printing—When washing flour sacks or anything with printing on, put in pan with cold water, a table-spoonful of kerosene and a tablespoonful of wash powder; set on stove and bring to a boil. This will loosen the print, and rubbing by hand will soon give you a nice, clean sack. Place them, wet, in the sun a few days and they will be very white. These are fine for tea towels. MRS. H. J. W., Oregon.

To Thin Paste—I always use vinegar in place of water with which to thin my paste, and I have never had any spoil, which frequently happened when water was used.

L. O. H., Tennessee.

To SAVE THE PIANO—So that moths will not infest the inside of a piano, make a little bag of muslin or other material, and in this put ten cents' worth

To CLEAN FURNITURE—If white spots appear on your polished furniture, simply moisten a cloth with spirits of camphor and apply. The spots will disappear immediately. L. G. C., Massachusetts.

USE FOR OLD HAT—For economy's sake excellent lamp wicks can be made from men's old soft felt hats. Cut felt into strips the proper width, soak in vinegar for two hours, and dry before using. These have been found to be a very good substitute for the regular wicks. E. M. Z., Montana.

To WASH WOOLEN BLANKETS-Have To WASH WOOLEN BLANKETS—Have two tubs of warm, soft water. Melt soap, and add enough to one tub to make good suds, then after rubbing with the hands (never on a board, as this hardens the blanket) thoroughly wring, and add a little of the soap to the second tub of water. Rinse in this soapy water. They will always he soft soapy water. They will always be soft and fluffy. Never rub soap on the blanket.

A. H., Montana.

Recipes

SANDWICH HAM-Boil a ham bone until the meat is tender, adding a little vinegar and a few cloves to the water. When cold, remove the gristle and chop the meat fine. Mix with one-half cupful of vinegar, two teaspoonfuls of but-ter, melted and hot, one teaspoonful of mustard mixed with a little water, one level teaspoonful of sugar, season with salt and pepper, and when this dressing is boiling hot add two well-beaten eggs, beating them in with an egg beater. When cold, add enough cream to thin the ham to a good consistency for spreading.

C. O. B., Nevada.

WHEAT MUFFINS—Two eggs, one pint of milk, one teaspoonful of salt, two large teaspoonful of salt, two large teaspoonfuls of baking powder, three and three-fourths cupfuls of flour. This quantity will make twenty muffins. Bake in well-greased gem-cake pans, in a hot oven, for fifteen or twenty minutes. C. E. S., Louisiana.

ROCK CAKES-One-half cupful of but-ROCK CAKES—One-half cupful of butter, creamed, one and one-half cupfuls of granulated sugar, three eggs, two and one-half cupfuls of flour, one teaspoonful of soda in one tablespoonful of hot water, one teaspoonful of allspice, one teaspoonful of cinnamon, one pound of English walnut meats, one and one-half pounds of dates. Roll thin and cut in small squares, and bake for about ten or fifteen minutes. These are like fruit cake—that is, they can be kept for quite cake—that is, they can be kept for quite a while.

K. V., New York.

BAKED APPLES—One quart of peeled and sliced good cooking apples, three-fourths cupful of granulated sugar, butter the size of a walnut; sprinkle of cinnamon. Place all in a casserole, if you have one, or, if not, in a small enameled pan and cover with water. Put in the oven and bake. Add more water if needed, but when done the juice should be thick and the apples a rich red: Serve with cream while hot, or they are delicious when cold if served with whipped cream. F. F. C., Ohio.

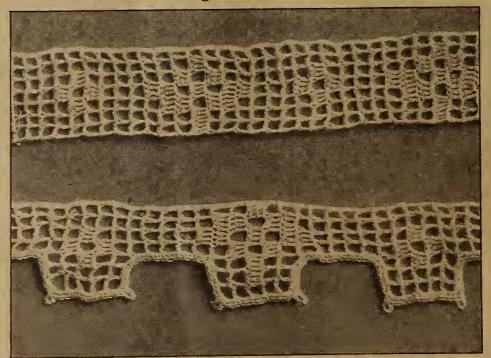
CLUB SANDWICH—Toast three slices of bread, butter each slice, place a lettuce leaf on each slice, and spread with mayonnaise dressing. On the first slice place some nicely fried bacon. Then put on a slice of toast, buttered and lettuced side up. On the second slice place some cold fried chicken. Then put on the third slice, buttered side down, over the fried chicken. This makes a delicious sandwich, and one that will be enjoyed by everybody.

M. L. Y., Oklahoma.

Doughnuts-Three cupfuls of flour, one and one-half teaspoonfuls of baking powder, two-thirds cupful of milk, onethird teaspoonful of salt, and one-half cupful of sugar, one tablespoonful of lard, two eggs, a little nutmeg. Mix together and roll out and cut, and fry together and 10... quickly in hot lard. F. M. V., Alabama.

CHEAP FRUIT CAKE—One cupful of cider, one-half cupful of lard, one cupful of brown sugar, one-half teaspoonful of ginger, one-half cupful of chopped raisins, one-half cupful of chopped currants, two cupfuls of flour, one teaspoonful of salertus, one teaspoonful of cinnamon, one-half teaspoonful of cloves, one-half teaspoonful of cloves, one-half teaspoonful of allspice, one teaspoonful of lemon extract. Mix sugar, lard, and cider together, add saleratus and spices. Mix thoroughly, stir in flour, extract, raisins and currants, and mix again. Bake in loaf in moderate oven, and set away six days before using. L. M. T., New York.

Filet Edge and Insertion



SINGLE edge and insertion which, worked in fine thread, makes a charming A strimming for fine waists and collar and cuff sets. For four cents in stamps the Fancy-Work Editor of Farm and Fireside, Springfield, Ohio, will send complete directions.



Take Heart

By Anne Porter Johnson

A FRIEND told this story. He said: "After a very discouraging day was sitting at the open window thinking of my troubles. The clouds about me were pretty thick, I thought. Things were in bad shape, and I felt sure they could not be straightened out. Sitting there, I predicted a sleepless, tossing

night.
"Suddenly up through the maple tree

"Suddenly up through the maple tree came the words, spoken earnestly, 'God can straighten out a lot of tangles overnight!"

"Of course, it was not meant for me, but I got the good of it anyway. Why, of course He could—in my distress I had lost sight of that! The words seemed to glint and sparkle from the walls. The edges of the dark clouds began to shoot rays of light. I slept like a child that night."

This experience is not so strange or unique. What thrilled our soul was the thought that the man beneath the window did not know, and never would

dow did not know, and never would know, the great service he had wrought through that little sentence. Unconscious influence! We almost

wince at the words, we have heard them so many times. How commonplace they sound! From pulpit and platform they have beat at our dull ears, only to make us wonder why the speaker expressed his thought in such an ordinary, trite his thought in such an ordinary, trite his thought and wet some commonly common. way. And yet some seemingly common-place things become radiant with life and beauty when they are given the

proper setting.

We plan to cheer, we try to help, but our plans and efforts come to nothing. At least we think so. We often wonder if we are doing anything at all to make

the world better and sweeter.
Well, take heart! Isn't it pleasant to think that unknowingly, as you walk along, smiling, as you speak cheerily, as you suffer bravely, you are helping someone, perhaps a stranger, perhaps a

A neighbor is tempted to dishonesty you hold him straight, although you do not know it. You may not believe it, but when your friend stood at the fork of the road you turned his feet to the

Look back into your own life-how often you have been helped by the touch of a tiny hand upon your face, a cheery laugh from the street, an arm stretched to guide a bent figure through the crowd, a song floating from a window, a faith that held firm through poverty

Through a slightly open door you heard your mother's voice in prayer. You found her Bible with a marked verse on the open page. Once you caught a tear in your father's eye. Perhaps you overheard your parents talking about you. These things have had a wonderful influence in your life-how well you know it!

Unconscious influence is something to be seriously considered, for it may be good or bad. Ah, that is what startles us! It makes us think and tremble, for, however humble and plain we may be, eyes are seeing our acts and ears are hearing our words.

There is only one safe way-honor, truth, charity, good will, unselfishness, must be woven into our very natures. Then, and only then, may we know that when men hear our words and watch our lives they will be helped, not hin-

Little Lessons in Living

By W. J. Burtscher

IVE and love so that you will be a benefit to your neighborhood by remaining in it.

It's no trouble to believe in the good of the human race when you are so full of it yourself that you can hardly see

There is no increase or decrease in the wages of sin. They are fixed, and

paid when due. Some men actually think that the salvation of their business is of greater importance than the salvation of their

Reprove your boy when he needs it; but if his companions should happen to be with him at the time, better do it gently, or wait until they are gone.

Practical Economy in Home Baking

Royal Baking Powder and Dr. Price's Cream Baking Powder are made from Cream of Tartar, which is derived from grapes. They leave no bitter taste and produce food which excels in flavor, texture and keeping quality.

It is not économy in the end to use other baking powders because they cost less.

Cheap powders differ greatly in leavening power.

If an inferior baking powder is used for a fine cake and the cake turns out a failure there is a waste of other materials worth much more than a whole can of the cheap baking powder.

There are no failures with Royal Baking Powder or Dr. Price's; hence they are economical in practical use.



Pick It Up and Walk Off

Did you ever see ony other 8 H. P. Engine two men could carry? Cushman engines are the lightest weight farm engines in the world—easy to move around and put to work anywhere. No longer necessary to put up with old-style, back-breaking, heavy weight engines, with their violent explosions and their fast and slow speeds. The Cushman weighs only about one-hith as much, per horsepower, but with its modern design, accurate balance and Throttle Governor, it runs much more steadily and quietly. and quietly.

Cushman Light Weight Engines

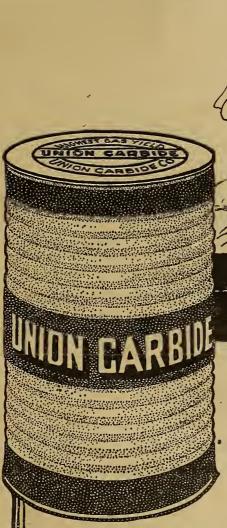
Cushman Light Weight Engines

40 to 60 lbs. Per Horsepower

The 4 H. P. weighs only 190 lbs. Mounted on iron truck, as shown below, it may be pulled around anywhere. Besides doing all other work, it may be attached to moving machines in the field, such as grain and corn binders, potato diggers, etc., driving the operating part and leaving the horses nothing to do but pull the machine out of gear. 8 H. P. 2-cyl. weighs only 320 pounds. Sizes up to 20 H. P. Not cheap engines, but cheap in the long run. Rook free.

CUSHMAN MOTOR WORKS

BOT Nerth 21et Street





Ask the good woman who cooks on a carbide range and lights her home with carbide lights-

She will tell you that Union Carbide is doing more for country home folks and country home life than any discovery or invention of this age.

She will tell you that her Carbide-range has added to her health and happiness by shortening her kitchen hours and by making her cooking a much simpler and easier task.

She will tell you that the range is a practical duplicate of her city cousin's gas range and that she turns the fire off and on with a twist of her wrist—saving all the time and doing away with all the bother and dirt connected with handling fuel and ashes.

She will tell you that all these advantages are the biggest kind of a help towards keeping both herself and her kitchen clean and cool during hot weather

She will tell you that her carbide lights in every room and out on the porch are the cleanest, whitest and most beautiful lights in the world.

She will tell you too, that all these lights are equipped with "friction igniters" to "light up" instantly with the pull of a little ornamental brass wire rod.

She will tell you that the handsome bronze and brass fixtures and the brilliancy of the light itself, has doubled the attractiveness and beauty of her home.

You must ask, too, the man of the house about Union Carbide itself-

He will tell you that in weight and bulk Union Carbide is quite like coal-that he gets his supply at factory prices, and that he gets it direct from the company's warehouse in his district.

He will tell you that his Union Carbide comes in blue and gray 22 inch—hundred pound "drums" (cans)—easy to handle, easy to store.

He will tell you that he keeps a six month's or a year's supply on hand in a corner of his barn or shed.

He will tell you that he, himself, not only comes in for his share of the benefits of the range in the kitchen and the lights in the home but he has his own carbide lights throughout his barns and in the center of the yard round about—big brilliant ball lights operated the same as the house lights without matches.

He will tell you also that the double benefits of both lighting and cooking make Union Carbide by far the most economical and desirable lighting and cooking service for country homes.

And he will tell you that the best proof that this is all so is the fact that he is only one of over 300,000 country home users to whom we now supply Union Carbide in the little blue and gray drums.

Send this coupon for our handsome advertising booklets giving complete information — with many illustrations.

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42nd St. Building Peoples Gas Building

Union Carbide Sale New York		Dept.14 San Francisco
Send me your adve	ertising literature	2.
Name	• • • • • • • • • • • •	•••••••
Address		(1)



Kalamazoo **Pipeless Furnace**

Get furnace comfort at usual stove cost. Write and get our new furnace book telling about this wonderful, popular one-register furnace.

Easy to install—one man should do it in a couple of hours' time. Economical of fuel. And the top notch in quality at a low price, because of the big output of the Kalamazoo factory and because you deal direct with manufacturers and get the wholesale price.

Write Today We pay the freight and allow lyear approval test. \$100,000 Bank Bond Guarantee.

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Kalamazoo, Michigan

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Children's Corner

Clever Tatters

By Anna C. Chamberlain

S UNCLE JACK finished looking over the daily paper and threw it on the table, little Helen, who had been keeping a sharp eye on him, came forward tugging her favorite animal story book.

"Read me 'bout the toad 'at swallowed his clothes," she coaxed, and Uncle Jack, turning to the well-known page, read the familiar story which was the little girl's favorite.

"Read it again," begged Helen before her uncle had stopped long enough for a full period, and Uncle Jack, who was

both kind and obedient, did so.
"Again, please," said Helen when he had finished a second time, giving her bewitching baby smile, and of course her adoring uncle could not say no; but when at the end of the third reading she made exactly the same request, even his

made exactly the same request, even inspatience gave out.

"See here, Baby," he objected, "you don't want me to read that story clear off the page, do you?" and Uncle Jack laid the book aside and picked up the

"Of course not. It's so silly to want the same story so many times," said Brother Aleck with a large air, though it must be said that he always managed to be on hand when Helen begged for her pet stories, and he was never known to run away even when they were repeated to the third and fourth time.

"That toad was a smart little fellow, all right," continued Uncle Jack, still remonstrating with the little girl. "He must have been to get away with his little girl instead.

remonstrating with the little girl. "He must have been, to get away with his old suit of clothes like that; but I saw little Tatters here do a very clever

thing the other day which I never read about in any book."

At this Helen settled down on her uncle's knee and Aleck drew up close to listen, for they were both warm admirers of Tatters. As for the little dog himself, at the mention of his name he gave up trying to pretend asleep and sat up brisk and alert, looking at his master with bright, unwinking eyes, as much as to say, "Yes, that's me. Now

"It happened right after dinner," said Uncle Jack. "It was Sunday, you know, and of course we were all on our good behavior, though I did not suppose that Tatters had noticed that.

At this second mention of his name Tatters rapped his tail gently on the floor to show that he heard, and Uncle

Jack continued.

"After we had left the table your Aunt Milly scraped the bits of meat and I nut gravy together into his dish and I put them down for Tatters."

A prolonged rap from the little dog, who was now anxiously watching to see

whether anything was expected of him.
"And what did the little fellow do,"
continued Uncle Jack, "but eat up every bit there was in the dish and then take a little red napkin and carefully wipe off his mouth and—swallow the nap-

kin."

"How could he, Uncle Jack?" objected Aleck. "Dogs don't have napkins, and, anyway, they aren't good to eat."

"He couldn't eat it," said Helen, joining in with Aleck's objections.

"Well, now you try it and see," said Uncle. "Perhaps I was mistaken about the swallowing part, but he put it in his mouth and kept it there as long as I was looking. You run and get a bit of breaklooking. You run and get a bit of breakfast for him," he added, turning to Aleck, "and then watch."

So Aleck ran out to the kitchen and

came back with a saucer of bread and milk, which Tatters seemed to accept as

milk, which Tatters seemed to accept as an explanation of the remarks about himself and ate it hungrily.

When he was through, the children watched breathlessly as the little dog polished the dish. Perhaps, as this was not a particular Sunday dinner, he might forget his manners. Perhaps, as the treat was unexpected, he might not have his napkin with him. have his napkin with him.

But no, as soon as he had quite finished, Tatters did just as Uncle Jack said. He took a little red napkin and wiped his mouth, first on one side and then on the other, and then he really did seem to swallow it. At least, he put this little red napkin into his mouth, and they did not see it again.

Aleck and Helen both pounced upon

Uncle Jack.

"That was just his tongue!" they cried with a tumult of happy giggles, while Tatters, bounding joyously about, barked a delighted chorus.

New Puzzles

Mr. Busybody's Inquiries

On his morning stroll Mr. Busybody encountered a laborer digging a hole.
"How deep is this hole?" he asked.
"Guess," replied the working man who stood in the hole. "My height is exactly five feet ten inches."
"University deeper one your going?"

"How much deeper are you going?"
"I am going twice as deep," rejoined the laborer, "and then my head will be twice as far below the ground as it is above the ground now.'

Mr. Busybody wants to know how deep the hole will be when finished.

Answers to Puzzles

Puzzles Printed Last Issue

A Square Word Puzzle

- Niche.
 Idler.
- Clara.
 Herds.
- 5. Erase.
 - Omitted Words

Be sure you are right, then go ahead.



Deacon Smith wanted every contribution, so he tried to wake Colonel Applejack by punching him with the collection pole

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The amazing success of my Steel Shoes—the tremendous growth of my big shoe business—makes this profit-sharing offer possible.

Because my Steels go direct to you from my big factories, I am able to sbare profits with you. Because ordinary sboe deal-ers can make only one profit a year on Steels, they will not sell them. That's why I want you to sbare profits with me.

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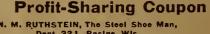
Good only until I bave added 100,000 new customers. I we all workers to enjoy the same comfort, satisfaction, prot tion and economy as my million satisfied customers, I ma this profit-sharing offer knowing that nnee you wear Ste you will buy no other workshoes. Every male member every family—no matter what his work—no matter where lives—needs Steels. Steels are indispensable, practically inc structible, light, comfortable, healthy, waterproof—the World Greatest Workshoe for farmers, mechanics, drovers, dairy a creamery workers, miners, truck and fruit growers, railro men, gardeners, etc.

Steels Save Feet Health and Money

No more tired, blistered, cbafed, swollen, calloused, aching feet. No more corns or bunions. No more bard, cracked, warped, twisted, worn, leaky shoes. No more big sboe-repair hills. No more rheumatism, lumbago, sciatica, neuralgia, bronchitis, colds, coughs and other "wet foot" troubles. No more big doctor hills. No more heavy, clumsy, sweaty rubber boots, overshoes or "arctics." One pair of Steels outlasts 3 to 6 pairs best all-leather shoes.

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Dear Sir:-
Please send me, without obligation, you 1917 shoe book and full details of your great profit-sharing offer.

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To Try In Your Own Home Turns night into day. Gives better light than gas, electricity or 18 ordinary lamps at one-tenth the cost. For Homes, Stores, Halls, Churches. A child can carry it. Makes its light from common gasoline. No wick. No chimney. Absolutely SAFP

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Hearts and Hazards

[CONTINUED FROM PAGE 24]

he vowed—"if I could. Yes, and walk all the way, too."

"Perhaps," she began tentatively,
"when Mr. Lukens's lease expires in
September, we might arrange—that is,
if we could—"

"Mother," he cried, and sat suddenly erect, his eyes alight with joy, "will you do it?"

"I've sometimes wondered," she said

"I've sometimes wondered," she said, smiling at his exuberance, "if I wouldn't

be just as happy there."
"You'll be happier," he assured her positively. "I guarantee that. Mother, shan't give you a moment's peace after this till you've definitely promised to go home in September." And now he was talking jubilantly, quite failing to no-tice, in his excitation, that the music in

the living-room had ceased. Lucy, however, soon advised him of

this.
"What are you two plotting out there?" she called, and a moment later she stood in the hall doorway, looking

she stood in the hall doorway, looking at them through the screen.

"Pack your trunk, sis," laughed Ben.

"We're all going home."

"Quit kidding," she said, though with a trace of apprehension. "Mother, what's he talking about, anyway?"

"We were talking of going back to the country, dear."

"But, Mother!" Lucy's dismay was pitiful. "Why, we can't do that! The loneliness would simply kill me. After living in a city—"

"And now, instead of the opening sentence, carefully rehearsed for this occasion, he stammered in confusion:

"Miss Sage—G-Gertrude—will y-you—would you mind—going horseback riding with me to-day?"

But it wasn't Gertrude, after all—only the maid.

"I'd like to speak to Miss Sage," said he.

"Miss Sage," replied the maid, "has gone motoring."

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"Mass Sage—G-Gertrude—will y-you—would you mind—going horseback riding with me to-day?"

"We were talking of going back to only the maid.

"And now, instead of the opening sentence, carefully rehearsed for this occasion, he stammered in confusion:

"Miss Sage—G-Gertrude—will y-you—would you mind—going horseback riding with me to-day?" living in a city-

"Perhaps, dear," said Mrs. Abbott gently, "in case we should go back you might care to accept your Aunt Ella's

might care to accept your Aunt Ella's long-standing invitation to visit her in Springfield."

"Maybe," said the girl noncommittally. "Anyway, don't imagine for one second that I'll ever live on a farm again—if I can possibly help it." With that ultimatum she swung on her heel and returned to her ragtime.

And Ben, untroubled, returned to his planning, happily taking it for granted that they were going home in September. His mother, however, would not commit herself, but, when pressed, only smiled indulgently in a way that implied, "We'll see about it."

Once she mentioned Gertrude, and

promptly Ben's face clouded.
"Oh, that's all off," he muttered, and would have closed the discussion there

had not she persisted.
"But aren't you giving her up rather

easily?"

"No, Mother. I saw to-night there was no hope for me. I was a fool to ever think there was any. I'm too big and clumsy for her. I guess," said Ben, scowling at the moon, "I'm not her style."

Not so easily, though, could Ben for-

Not so easily, though, could Ben forget her, and when he entered her father's office next day, resolved to divulge what he knew against Henkel, she still

occupied a prominent place in his mind.

"Mr. Sage," he began, not without difficulty, "I've been thinking about the proposition of this Mr. Henkel, and—I was wondering—" He meandered to a full store.

full stop.
"Yes?" encouraged Sage, looking up

from his desk.

"I was wondering," Ben struggled on,
"if you were favorably impressed with
his proposition. Are you?"
"Well, I'm interested in it. If his

claims are true, it's a tremendous discovery and one of big commercial importance. But of course," said Sage, with a wave of his hand, "I shan't invest a nickel till I've thoroughly investigated his forencial rating and having tigated his financial rating and business references.

A VAST relief surged through Ben, and, as soon as he decently could, he quit the office, feeling that the distasteful business, in so far as it concerned him, was ended. His employer would presently learn of Henkel's villainy, so why need he, Ben, interfere?

This was Saturday and a half-holiday and when he started home around

day, and when he started home, around one o'clock, he was thinking again of Gertrude and of what his mother had said last night about his giving her up. He asked himself now, as his mother had asked him last night, if he wasn't doing this rather easily. Surely, he should at least make some sort of fight before abandoning hope. Maybe, too, he had undervalued himself when he declared he was not her style. Mother had said so, anyway—but that, no doubt, was because she was his mother, therefore prejudiced.

Walking on beneath the towering elms in the shady street, he looked back over his acquaintance with Gertrude Sage, and found therein no ray of hope, nothing to warrant the belief that she had ever regarded him as a wooer, either real or potential. And why, indeed, should she so regard him? He had never betrayed the slightest hint of his feeling for her. Often, when alone, he had thought of doing so—had even

conceived the exact words in which he would declare his love, and then, the very next time he met her he had become as dumb as a frozen fish. At no time a ready conversationalist, he was tongue-tied on this topic.

Now, however, decided Ben, the time had come for definite action. The presence of a possible rival would admit of no further delay. Ere he unfatched his front gate he was resolved upon a line of procedure that promised well. Since he had been unable to utter his heart in her presence—probably because her exite loveliness overwhelmed him and made him too conscious of his own shortcoming—he would reveal his passion via the telephone.

Passing his mother, sewing on the front porch, he went forthwith to the hall telephone, fearful lest, at the last moment, his courage desert him. In the interval required by the operator to connect him with the Sages' residence his throat grew curiously dry, and he must needs moisten his lips copiously before he could answer the reminine voice which presently spoke at his ear. And now, instead of the opening sentence, carefully rehearsed for this occasion, he stammered in confusion:

"Miss Sage—G-Gertrude—will y-you—would you mind—going horseback riding with me to-day?"

But it wasn't Gertrude, after all—only the maid. before he could answer the feminine

"Alone?"

"No; not alone. She went with a gentleman from Chicago—a Mr. Henkel."

MRS. ABBOTT could not help over-hearing her son's end of this conversation, and when he came out to her on the porch she divined what the other end had been. She saw by his face that he was deeply hurt, and she knew the only remedy that would afford alleviation. She rose, contributing her sewing to a wicker basket.

"Dear, it's such a glorious day, let's drive out to the farm."

Pen's depression almost, if not entirely, vanished at the sight of green fields and country woods, and when he and his mother drove within sight of and his mother drove within sight of their homestead his heart swelled with ineffable longing. The place was now at the very height of its production, and the bountiful crops, the peace and plenty, everywhere apparent, allured him, beckoning him back to the soil, as

nothing else could.

"Mother," he asked, very earnestly,
"don't you want to come back? Don't
you feel the call too?"

She smiled at him happily as they walked on through the fragrant meadw, and that was her only answer-

"I don't like the way Lukens is running things. It's his funeral of course, but it fairly goes against my grain to see any farm run at a loss, and our

farm is one of the best in Illinois."

"But he's not running it at a loss, is he, Ben? Everything looked pretty prosperous to me.

Well, of course the hands have saved him a lot. But Lukens doesn't know anything about farming, Mother; not a thing. He never was cut out to be a farmer. When I saw him trying to handle that heifer in the barnyard it was all I could do to keep from butting

in and showing him the right way."
"You did show him, Ben."
"Did I? Well, I hope he doesn't forget it. Lukens is a good fellow, and I like him, but he's not a farmer. You said the farm looked preserves: it is said the farm looked prosperous; it is prosperous, but it's not as prosperous as it was when we had it; and that," said Ben, looking squarely at his mother, "brings me to what I want to say: Mother, we've got to go back."

"What about Lucy?"

"I'll attend to Lucy." said he increase.

"What about Lucy?"

"I'll attend to Lucy," said he, increasingly delighted to perceive she was yielding to him. "If she doesn't want to go to Aunt Ella's, and if she won't go back to the farm, maybe she can be persuaded to go to boarding school."

Slight persuasion was needed for

Slight persuasion was needed, for Lucy, it developed that night, was hap-pily amenable to the boarding-school idea and straightway, with great zest, examined the educational advertisements in a late magazine. The final objection thus removed, Mrs. Abbott at last gave her son a definite answer, and so the three of them sat that evening, around the living-room lamp, all planning for the month after next, though

One of the loves of Ben Abbott's life—his love for the earth—was to be thus satisfied; but the other—his love for Gertrude Sage—remained to torment him; and he made a resolve to end this torment, or at least the uncertainty of it, with no more ado. On the following day, Sunday, he started for the Sage home with the stern determination of making a proposal of marriage.

[TO BE CONTINUED]

"The Best Thing We Ever Bought!



Because it has done away with the wash-day problem for all time, because it supplies power in the home to do the work a machine should do-because it is so simple and thorough in its work that is why the

> Maytag Multi-Motor Washer Swinging Deversible Wringer

> > has earned the commendation of owners in many lands as the best household utility they ever bought.

Simply put in the clothes and start the little engine—a slight pressure of the foot does it. It needs no watching-no attention. Its compact

construction does away with exposed gears and unprotected revolving mechanism, making it absolutely safe. Engine runs cream separator-bone grinder-ice cream freezer-churn-any small machinery when washing and wringing, if desired. Operates on gas or gasoline. Does a big family wash in no time.

Guaranteed for three years-money back if not satisfied.

FREE: "The Maylay Laundry Manual" containing expert launderer's secrets on how to properly wash all fabries. Valuable for the housewife—send for a copy—it's FREE.

THE MAYTAG COMPANY

Branches and Warehouses in Most Principal cities. There is a Maytag Washer of every type—hand—nower driven—electric—all built to the enviable Maytag Standard DEALERS: Investigate Maytag proposition. Write!

"Why, Man, \$20 a Day is Impossible!"



"Of course if I was a genius—or if my personality would dazzle everyone I met—mayhe I could make that much. But you forget that I'm only an ordinary dub. Why, it's simply insane to think of me making \$20 a day on a proposition like that!"

The young man pounded the table with his fist in order to he sure that he was not misunderstood. He was so emphatic—so certain—so positive that he was right, that it was only with the greatest difficulty that we persuaded him to undertake our work.

Yet, during the first two weeks of Septemher, this same young man—John Mitchell of Newark, New Jersey—made \$308.50 net.

Like the "experts" who once "proved" that a steamship could never cross the Atlantic, he discovered that he had not heretofore been working from his ears up. '

He could not understand—then—how the same energy which would earn \$2.00 a day in one direction, could earn \$20 just as easily, in another. He hadn't had experience enough—then—to realize that a man's reputation for winning was the result, very largely, of his skill in picking winners.

In fact he thought-and said so very forcibly and frankly-that to earn \$20 a day.

We can offer YOU the same opportunity we offered him—an opportunity for more money, pleasant work and independence—an opportunity through which 103 men made more than \$200 each, last month—an opportunity to represent us on our special agents' plan of interesting new readers in FARM AND FRESIDE.

If you are looking for a real man's income—work that is delightful and pleasant—a chance to he your own boss—then fill out the coupon and mail to us to-day.

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I am anxious to know how I can make more money by representing FARM AND FIRESIDE through your special agents' plan. \$10-7\$



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New Styles in Hats

Let the Editor Buy Your Winter Millinery



tive hat for the mature woman, a hat suitable not only for dress occasions but to wear with the tail-ored suit as well. It is developed in soft silk velvet and trimmed with two beautiful ostrich plumes. The brim has a becoming shape, and the crown a stylish tube effect at the top. Colors, all black or black with white plumes.

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generally becoming. It comes in black, brown, navy or army blue. Price, \$2.49.

How to Get These Hats

WRITE a note stating the number of the hat you want and the color you desire. Enclose it with the price of the hat in money order, check, stamps, or currency. SIDE, Springfield, Ohio, but make your check or money order payable to FARM AND FIRESIDE. The hats will be sent you by parcel post, postpaid. Hats that are not entirely satisfactory may be returned and your money will be refirm from which they came. Explain carefully that the hats were ordered through FARM AND FIRE-

blue, dark green, or brown. Price, \$2.25. The New Styles in Hats

No. 6-Fur is the only but very smart trim-

ming on this close-fitting hat of velvet. The

deep plaited brim and the large wired wing

are edged with the fur. Colors, black, navy

ribbon trimming, the bow

pierced with one of the new fashionable jet hat-pins. Colors, black, brown,

or navy blue trimmed to match, also black with black and white ribbon,

or navy blue with blue and white ribbon. Price,

THE fashion experts In York and other fashion centers and small hats favor both large and small hats this season. If it is a large hat, it is usually in sailor shape; if small, Be sure to address the note to the it is a close-fitting model either of Fashion Editor, FARM AND FIRE- draped velvet, or perhaps with a narrow brim and a high crown. It is interesting to note that the new hats show very little trimming, but what there is, is placed in an effective way that is sure to prove becoming. The trimming is either arranged to give a high funded. Send hats direct to the or a broad effect. Choose the style that becomes you. Fur, ostrich, and ribbon are the favored trimmings, and velvet the most popular fabric for hats.



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THIS novel and attractive combination of apron and dress will solve one of the hardest problems faced by the busy housewife—that of being always presentable, whether at work in the kitchen or opening the door to the unexpected caller.

As the illustration shows, the apron buttons securely onto the dress itself, for work hours, but half a minute will serve to unbutton and slip out of the kitchen part of the garment. A pretty little gingham house dress remains, in which one is quite prepared to receive a visitor or run out for an unforeseen errand. The illustration shows the combination apron-dress made up in a pretty dotted cotton fabric, with a collar of white linen. This will launder nicely, and look neat and trim, either in the kitchen or





No. 3129—Surplice Waist with Shoulder Yoke. Sizes, 40 to 50 hust. Material required for 40 hust, four and three-fourths yards of twenty-seven-inch, or three and one-eighth yards thirty-six-inch. The price of this pattern is ten cents

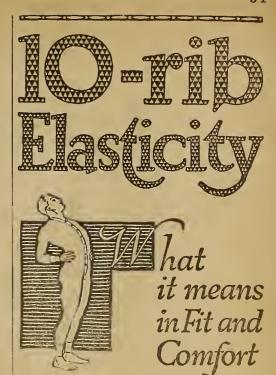
No. 3130—Panel Skirt with Tncked Flonnce. Size, 30 to 40 inch waist. Material for 30 waist, seven yards twenty-seven-inch, or five and one-fourth yards thirty-six-inch. Width of skirt, three yards. The price of this pattern is ten cents

No. 3117—Long-Sleeved Waist with Vest. Sizes, 34 to 42 hnst. Material for 36 hust, two and one-eighth yards of thirty-six-inch, five-eighths yard contrasting for vest and collar, and one and one-eighth yards for lining. Pattern, ten cents

No. 3118—Six-Gored Skirt with Side Tunics. 24 to 32 waist. Width, three yards. Material required for 24 waist, five and three-fourths yards of thirty-six-inch, or five and one-half of forty-inch material. The price of this pattern is ten cents



No. 3104



BUT," says the scoffer, "is there really so much difference between 10 ribs per inch and 8?"

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Then Friend Scoffer scoffs no more. For even doubting Thomases can't very well disbelieve what their own eyes see and their own hands feel.

The remarkable elasticity of Mayo 10-rib fabric makes it hug your body with a snug, true fit. For Mayo 10-rib knitting is the same kind of knitting that comes in dollar goods.

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The same 10-rib knitting that's found in dollar under-

All dealers have Mayo Underwear or can very quickly get it for you.

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Sleeve-Valve Motor

- When it comes to pulling long hard hills with twisting, turning country roads—
- When it comes down to real work, day in and day out, month after month, year after year—
- The Willys-Knight is the one type of motor that can stand up and deliver—never weakening but getting stronger all the time.
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- ¶ The motor almost never needs go to the shop—
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- That's a vital advantage to the man who doesn't live on a paved street next door to the garage.
- Besides all the tremendous advantages of the Willys-Knight motor for everyday work in any kind of weather on every kind of road, the Willys-Knight has everything else you could ask in a strictly up-to-date motor car.
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More Than 600,000 Copies Each Issue

FARM TO TRESIDE

The National Farm Paper - Twice a Month

ESTABLISHED 1877

5 cents a copy

Saturday, October 21, 1916



A CAUSE AND ITS EFFECT

An observation of interest to owners and prospective owners of motor cars

To start with a clearly defined purpose and to pursue that purpose with an unwavering determination and an intelligence, born of experience, is to insure ultimate success.

The paths of business are strewn with the remains of those who have failed to recognize the importance of this fundamental.

The history of business is replete with obituaries of those who started to go, knowing neither where nor how.

The Maxwell Motor Company was founded to build a certain type of motor car; to build it just as well as experience, money and human ingenuity would permit, and then to produce it in large volume so that a low price could be possible.

The Maxwell Motor Company has worked ceaselessly to this end. Every part of our plan has been rigidly enforced. No available resource that could aid in the achievement of our purpose was overlooked.

The dominant, underlying note in the policy of our company has been, and always will be, to build a motor car of honest materials and by honest methods. We know that merit and value make the only permanent foundation for our structure of success.

Merit and value imply comfort, an attractive design, an efficient motor, a sturdy chassis, the use of the best materials, complete equipment of tried accessories and economy in first cost and aftercost.

Each one of these qualities is part of the Maxwell

Car. We do not put forth any one of them as a compelling

reason why the Maxwell should be the car of your choice.

We are selling motor cars—complete motor cars—and consequently do not base our appeal on motor speed or power, wheelbase, bulk, weight or lack of weight, appearance or any other single feature.

For example, the Maxwell engine, per pound of weight to be moved, is the most powerful automobile engine in the world. But we do not sell you a car on that account alone. We sell you because the Maxwell has every desirable feature—among which power is but one.

We hold that our manufacturing and selling policy is right. In proof thereof, we point to our record of accomplishment, which is nothing short of phenomenal.

Since the founding of our company, three years ago, we have doubled our output annually; we have improved our car constantly and three times we have reduced our price.

Having behind us the tremendous value of public good will, an organization of dealers and distributors that is second to none and an improved product that is making good in a big way, we will build (entirely in our own factories) and sell this year, 125,000 automobiles.

We are proud of our record. It is something rightly to be proud of. Things do not simply happen. There is always a reason for such an unusual success. Feeling certain that our plans and policies are correct, we will continue to follow them as faithfully as in the past.

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President

Roadster, \$580; Touring Car, \$595; Cabriolet, \$865; Town Car, \$915; Sedan \$985.

All prices f. o. b. Detroit. All cars completely equipped, including electric starter and lights.

Motor Company Inc. Detroit. Mich.



Write to Dept. D for Catalog of the Complete Maxwell Line

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No. 2

A Made-Over Living-Room

Paint, Paper, and Good Planning Transform an Old Farm Parlor

By RUTH MURRIN BOYLE

Out of an ordinary and cheerless parlor in her farm home a girl made a comfortable and inviting living-room at small expense. This article tells how she did it.

THE EDITOR.

other end of the kitchen table.

"She won't; you can depend on it. There isn't a more sensible girl in the country than Clara. If she wants to make changes we'll just give her a little rope, and I'll bet the changes she wants to make won't do any harm."

Clara came home, and in the first few hours of being with Father and Mother, meeting the neighbors, and visiting barn, orchard,

visiting barn, orchard, and pasture, she was perfectly happy. Then she began to miss something. She had been helping her mother with the baking all morning, and after the

memories—happy evenings when friends dropped in, or long, contented hours when each member of the family found some comfortable nook and followed his

People who "dropped in" at the Evans home usually sat in the kitchen. Strangers and more formal callers were entertained in the parlor, and always never noticeable in the Stafford home.
"No wonder," thought Clara, "in such an ugly room!" with a touch of stiffness and constraint that was

It was an ugly room. It made one think of a girl in old-fashioned, awkward, unbecoming clothes. The wall paper was ugly. The ceiling paper with its border of pink flowers that came down to the molding a foot below the ceiling was especially bad. The tan a foot below the ceiling was especially bad. The tan carpet that would never wear out, simply because it was the parlor carpet and was so seldom walked on, was ugly. The pictures that hung on triangles of wire from the gilt picture molding were too numerous. Some of them were good prints, but they were either poorly framed or they were hung in the wrong space. The davenport looked cold, unsocial, too big for the room. The chairs, perfectly good in themselves, seemed out of proportion, uneasy.

Clara returned thoughtfully to the scene of her morning labors, and read her book in the corner of the kitchen.

the kitchen.
"What sort of a floor is there in the front room?"

she asked that evening.

"Why, I suppose it's a good hard-wood floor," her mother answered. And then, as if to forestall any suggestions from her daughter, she added: "I've EW"

wanted to put a good new rug in that room for this long time, but it seems as if that carpet will never wear out, and it's too good to rip up and put a new one down in its place."

"Your mother and I have been talking some of changing the old house and fixing it up when you came home," interrupted Father Evans hastily. "You might begin with the front room."

"You mean I can do anything I want to with it?" Clara was so eager that she failed to notice her mother's surprise and hesitation.

"Anything within the limits of the family bank

"Anything within the limits of the family bank account. You might get up a sort of budget of what

near the ceiling, which was covered with paper of an

The cherry-stained woodwork was clearly impossible when compared with the paper. A coat of white paint and two coats of ivory enamel with a dull finish were applied, which gave just the velvety appearance she wanted.

Faint remains of old paint which had once covered the floor, and other old stains and spots, soon faded under the energetic treatment Clara gave them with sandpaper and steel wool. At last the floor was finished with an oil preparation that gave a finish which was not as slippery as wax and which was

much easier to apply.

When the room was ready for furniture again, Clara hemstitched curtains of dainty cream marqui-sette, reaching just to the window sills. To give color and life to the room she added side curtains and a narrow valance of gay chintz in which rose pink was the predominant color. "If the bank account

"If the bank account were bigger and if we weren't going to give this room such hard use, I would buy curtains of that lovely soft rose drapery," she said, holding up a sample. "But as it is, the chintz will say, 'Come in and rest,' if we happen to have a minute from our work in the kitchen, while the rose stuff would be a little more elegant and standoffish. If these curtains should fade, or if we get tired of them, the material is cheap enough so that we can easily replace them."

The marquisette curtains were bant wide

them up again, and still there is no danger of their becoming dislodged.

The rugs were almost as much of a problem as the wall paper. The single large rug which Mrs. Evans preferred was much too expensive, and Clara thought it almost as hard to clean as a carpet. She finally bought two small Brussels rugs with a brown background and a design that echoed the green of the walls and the rose and green of the curtains. Having two smaller rugs instead of one large one helped her to get the effect of unity and proportion she felt that the room had lacked. It was too small to have the cozy nooks and niches Mrs. Stafford's living-room

"We'll have to make one spot in this room the climax of the whole thing," Clara decided. "If we only had a fireplace, there wouldn't be the slightest doubt about it.

After much experimenting she decided that the reading table would have to be the "climax." The old center table was banished as impracticable and taking up too much room for the service it gave, and after examining dozens of library tables, large and small, she decided on a light gate-leg table as most suitable for a small room and still strong enough to stand the use it would get. The big pink lamp which had for years lighted the parlor on the occasions when it was used in the evening disappeared with the center table on which it had stood, and in its place came one with a brown pottery bowl and a wicker shade lined with tan and a trace of pink. Clara placed the table near the double window facing the south, and grouped two wicker [CONTINUED ON PAGE 11]



logues and the advertising columns of the magazines, and in making trips to town whenever she had a chance to do so. By the time she had her plans made, her mother was as interested as she was in making the most of the "front room." She emptied the room of furniture and pictures, took down the curtains, and took up the carpet so that she could study its possibilities without being influenced by its present appearance. She began by having a double door made instead of the single entrance into the narrow hall. This brightened the hall wonderfully, made the room seem larger and more inviting, and when the doors were opened would make a pleasing prospect from the dining-room beyond.

Makes Everything Harmonize

IT WAS hard to find the wall paper she wanted. A dull-toned foliated paper that would have been just the thing for a southwest room was too expensive. Her father shook his head when she mentioned the cost. Clara began her search through the big sample books again. In turning over the gaudy sheaves of cheap papers, she paused over one with a huge sprawling figure in brown and red and gilt. The wrong side was a plain, restful green. Why not use that paper wrong side out? Clara bought a large sample and tested it thoroughly with paste and water to be certain that the figure side would not show through when it was hung. Then she hired an expert paper hanger to put it up, because she knew that a room can be made or ruined by the way the paper is The picture molding this time was put up

A Living From Peonies

Half of the Sales are Made to Visitors on the Grounds

By ROBINSON GREENE

AISING a quarter of a million peony blossoms for the market is the novel occupation of Mr.

for the market is the novel occupation of Mr. Frank Siether, whose peony farm is located within the corporate limits of the city of Cleveland. In June each year his crop is harvested, and for two to three weeks his field of blooms is the mecca of hundreds from Cleveland and adjoining cities. Peony farming is Mr. Siether's only work. Fifty years ago he worked on the farm of which his present land was a part. That was in the days when the city of Cleveland was growing up. In time he left the farm and, moving to the city, went into business for himself. He took with him the daughter of the farm home as his wife. Later the farm was divided and sold, and he purchased a piece of 22 acres. When the doctor ordered fresh air treatment for his daughter, IIr. Siether built a substantial brick home on his farm and moved to the country.

When he retired from business he determined to enjoy his remaining days in the open air. The peony

enjoy his remaining days in the open air. The peony field has claimed him. Soon after moving to the new home he planted a few peony roots because both he and his wife were fond of the large, beautiful flowers. His interest in peonies grew, and soon he had a bed containing 375 varieties of this one plant. Such a collection naturally attracted attention and drew visitors, who usually wished to carry away with them some of the blooms. A price was set, and year by year the demand has increased.

For seventeen years he has now sold flowers to the public, and while he has kept no accurate record of the number of flowers cut last June, an estimate based upon the number cut on two days would show a total in the neighborhood of a quarter of a million.

The little garden behind the house has grown until this year it covers six acres. The clipping of blooms has become this season a task for four men. The visitors that carried visitors that carried bouquets down the road have become a procession, and not only do the strings of private automobiles go laden from the farm, but a wholesale florist with his delivery car and two men has been busy.

wholesale horist with his delivery car and two men has been busy.

Mr. Siether has made no bid for business. Business has been forced upon him. Established only as a hobby, a business of fine proportions has developed. Retiring to avoid business cares, he has found an industry forced upon him by admiring customers. Unadvertised, heralded only by volunteers who would not be stilled, the demand exceeds the supply, and though he plants more rows each year, he is unable to catch up with the requirements.

What might be done by a man who would make a reasonable effort to advertise his line and reach a large trade is easily foreseen.

line and reach a large trade is easily foreseen. It is evident that any-one situated within reasonable distance of a large city can advan-

number of first-quality blooms rather than any question of the market for his stock.

Peonies Require Highly Fertile Soil

THIS season Mr. Siether cut from 10,000 to 18,000 blooms a day during a season of three weeks. About 50 per cent of his sales were to visitors on the grounds. In the early years of his industry all of his sales were to visitors. Later he sold a portion of his flowers to city florists who came to him for them. Last year a wholesale florist of Cleveland arranged with him to take off his hands all the flowers he had for sale other than those sold to customers on the grounds. This worked so well that it was repeated this season. Visitors send others to see the beauties once started, the field advertises itself.

While the peony is a long-lived plant, its flowering life is normally only from the second to the sixth or seventh season. It is wise to set fresh beds each year or two, so as to have always fresh, vigorous plants and obtain the most prolific results. The old roots are dug up, cut into pieces, leaving one eye in each piece, and the pieces replanted. An additional reason why Mr. Siether has followed this plan of propagation is that his ground is a clay that have a hadly in tion is that his ground is a clay that bakes badly in all but favorable seasons. He has found that the peonies will do well on this soil when ordinary crops fail. Peonies require heavy manuring and fertilizing

to obtain the best results.

Mr. Siether has not been troubled to any serious extent by that pest of the small peony garden, the ant. He states that a little red pepper will eradicate

the pest should it become annoying. He has raised as many as 375 varieties, and has at present 139 varieties in cultivation, but he recommends that the grower restrict himself to ten, or at most twenty, varieties. When there is a large number of varieties varieties. When there is a large number of varieties to select from, the customer wastes much of the salesman's time by inability to decide, while with fewer to select from he obtains his purchases in a much shorter time and is just as well satisfied. The choice of colors is problematic, as Mr. Siether finds that sales depend upon the demands of society and, like all fads, it varies from season to season.

The harvest starts early in June and depends upon weather conditions. Usually three weeks of cutting may be realized, but in one rare case a warm, sultry day, followed by a still warmer and humid night, forced all the plants into bloom, and two days later the field was exhausted. That year he sold but \$25 worth of flowers.

Under normal conditions, however, the flowers

Under normal conditions, however, the flowers come out gradually and last very well. During this period large quantities of the buds are also cut. This stimulates the plants to greater production and prolongs the season.

The buds are put up in paper packages of a dozen each. The stems are left protruding, and are set in dishes of water. The packages are then placed in a cold storage room at 38 degrees, and kept until the flowering season is past. The cold keeps the buds downant and later when they are removed to dormant, and later, when they are removed to warmth, they open and are sold. In this way the selling season is lengthened, and the number of blooms borne is largely increased. Mr. Siether cuts the buds, and turns them over to the wholesale florist

purest, whitest light, and is easiest on the eyes. Indirect and semi-indirect shade bowls under electric lights, however, give an exceptionally pure light.

Acetelyne lighting systems came on the market shortly after 1895. Acetylene is a gas generated when calcium carbide is added to water. The gas has twelve times the illuminating power of the same volume of ordinary city gas, and the light it gives is absolutely white. It is the nearest approach to daylight of any lighting system, and can be relied on for matching colors accurately. Though it has a pungent odor when allowed to escape unburned, it will not asphyxiate a person, as it is not poisonous. Certain mixtures of acetylene gas with air are explosive, but these mixtures seldom occur except when the gas and air are chemically united intentionally.

The generators are automatic, and require attention only at intervals of several weeks for the renewal of the carbide.

Various gasoline lighting systems are now perfected to the point where they are safe and efficient.

In most of these you

This is a portion of Mr. Siether's six-acre peony garden, which bears a quarter of a million blooms a year. Former visitors bring friends to admire and select from the 139 varieties grown

The heaviest work is, of course, the picking. The cultivation eleven months of the year is easily handled, and the grower could well manage without any help save during the harvest. Mr. Siether keeps two men the year round, and pays them \$45 a month each,

Since the results that he obtains under such conditions are remunerative, it is certain that the grower who works economically and under less expensive conditions can certainly make a good living.

Lighting Systems

By CARLTON FISHER

HERE is a much greater difference in the brilliancy of different lights and the cost of using them than the user of just one kind of light would imagine. After testing the principal kinds of portable lights, a Pennsylvania investigator concludes that kerosene lamps without mantles give a light very much unlike daylight, are hard on the eyes, and are likely to produce nervous irritation. eyes, and are likely to produce nervous irritation.

This verdict seems almost a death sentence to the

ordinary kerosene lamp which still excels in numbers used, probably because of its low purchase price. But there is no escape from the truth that several kerosene lights in a small room soon devitalize the air,

make the eyes smart and the brain dull.

The amount of light given by different lamps and

the cost of burning them are briefly as follows: A kerosene lamp with a 1½-inch flat wick gives about 12 candle power and costs a fifth of a cent an hour to

A kerosene lamp with a 1½-inch circular wick gives 18 candle power and costs three fifths of a cent an hour to burn. A large percentage of the fuel goes

A kerosene mantle lamp with a %-inch round wick gives 28 candle power at a cost of a quarter cent an

A gasoline lamp giving 250 candle power costs about $\frac{1}{3}$ cent an hour to burn.

A single-burner acetylene lamp, giving 22 candle power, costs slightly less than a cent an hour to burn.

Taking everything into consideration, large lamps are the most economical of oil in proportion to the are the most economical of oil in proportion to the light given, and mantle lamps are more economical and give better light than ordinary wick lamps.

Besides, a kerosene lamp having a mantle takes just about a quarter as much oxygen from the air as one with a wick. A good kerosene mantle lamp costs about \$6, requires very careful trimming of the wick, and gentle handling. If given this care, it is satisfactory factory.

Have 20 Candle Power for Reading

FROM a health standpoint alone, electric lights probably excel all others, but acetylene gives the purest, whitest light, and is easiest on the eyes. Indirect and semi-indirect shade bowls under electric

efficient.

In most of these you must first burn a little alcohol torch under the generating tube to start the gasoline vaporizing. After that it burns automatically. The gasoline tank must either be higher than the light in higher than the light in order for the gasoline to feed to it, or else the feed must be supplied by pumping air into the gasoline tank. Gasoline gas properly mixed with air burns with an in-tense heat in a mantle lamp, and gives a bril-liant white light. Gaso-line lamps can be had either in portable style or the generator may be in the basement or closet and the gas car-ried through a hollow wire to stationary fix-

Gasoline lamps are also made that will light with a match. This is accomplished by means of an auxiliary generating tube, and after the lamp is lighted the gas is generated in the main generator.

sonable distance of a large city can advantageously adopt this specialty and be assured that his only worry need be the growing of a sufficiently large supplies the cold-storage quarters.

| Cold | are certain disadvantages as well. They make considerable noise, especially when the air pressure is strong. In time you get used to the blowing sound, and with experience you can have the pressure just right and turn on the lamp just enough to give the best light with the least amount of blowing.

I have found the claims made concerning the durability of mantles to be well founded. In my gasoline lantern I am still using a mantle that was used all last winter and has been out in several blizzards. Also the lantern was knocked down on one occasion, falling on its side without damage. The light hardly flickered. This lantern makes night work a pleasure, and when I go into my hen house at night the flock invariably flies down off the roosts unless I turn the lantern down to but a fraction of its full brilliancy.

After looking over the field thoroughly, I have come to the conclusion that no lighting system has all the good points. For \$25 one can get several brilliant gasoline or acetylene lamps. For less money you can get mantle kerosene lamps. For less money you can get mantle kerosene lamps. A good light to read by should be at least 20 candle power, and the method by which the light is obtained is after all largely a matter of individual preference. As a rule, the choice depends somewhat on the convenience of getting electricity, gasoline, kerosene, and carbide.

For the man who can afford an electric lighting system, that is undoubtedly the most satisfactory.

system, that is undoubtedly the most satisfactory. But if the amount to be spent for lighting is limited, a practical plan is to have a good gasoline lantern, a gasoline or acetylene lamp, two good battery flash lights for quick use, and several kerosene lamps, preferably equipped with mantles.

"Stump Dentists" at Work

Crew of Experts Shows Best Methods of Clearing Land

By FRED L. HOLMES



An expert proved how better placing of dynamite reduced cost of blasting

"LAND-CLEARING SPECIAL" train touring for six weeks through eleven counties in northern Wisconsin, denuding 10-acre land patches of stumps at each of its three-day stops, has done more by demonstration to help farmers in the best methods of clearing land than many of the agricultural bulletins issued on the subject. As a result, county agricultural representatives say that more land will be cleared of stumps in the Badger State this year than in any other single year in the State's history. The success of these demonstrations furnishes a lesson to every State with a stump problem.

demonstrations furnishes a lesson to every State with a stump problem.

This demonstration train was operated co-operatively by the college of agriculture of the state university and manufacturers of land-clearing products. The train consisted of one flat car, two box cars for equipment, two bunk cars, and a boarding car. The expense of hauling the train was donated free by one of the large railroads of the State.

With it went fifteen expert "stump dentists;" some sent out by the university, and the others by the manufacturing concerns in the State. The project was not an adjunct to any real-estate scheme; it was not run for the benefit of any individual manufacturers: it was operated with the single idea that the best and most economical means of clearing land of best and most economical means of clearing land of stumps should be brought to the farmer.

Demonstrations More Popular Than Bulletins

ON THIS six weeks' trip these "stump dentists," as farmers along the route called them, gave free demonstrations of hand, horse, and power stumpers and pilers, as well as "safety first" explosive methods. The farmers turned out as if they were going to a fair. But they didn't stand back and look on. Some showed the methods they had used. All asked

questions. The results confirmed the ideas of many at the agricultural college that the mere sending out of bulletins on growing better corn, alfalfa, and pure-bred cattle was not reaching the heart of the Before crops can be planted and animals raised, the land must be cleared of its stumps. In this respect the land-clearing special served to overcome the prime obstacle in the way.

These demonstrations were one of the most unique and comprehensive rural - service enterprises ever offered in Wisconsin. They were advantageous to the lumberman, for they will help to market his idle cut-over lands from which the timber has been chopped. They aided the farmer by showing methods of getting his rough, uncleared land into early income-producing property. Crop production from only a part of these 10,000,000 acres of cut-over lands in Wisconsin will mean much. These increased acres of crops will increase the former's corn increase the farmer's earnings, develop the mercantile institutions of these local communities as well as the resources of the State.

Beginning near Mountain, a little hamlet in the northeastern section of Wisconsin, the special moved slowly across the northern tier of counties along the Minnesota border. Sixteen stops were made in eleven counties. At each place a 10-acre tract of stump land was staked off into strips by Engineer Carl D. Livingston, who had charge of the crew. Danger signs were posted so no one would be injured. end of the plat was a strip for the dynamite crew. Next was for the man stump-pulling machine, then a horse machine, and then the team machines of the heavier type. Farmers saw dynamite working side by side with mechanical devices. Free clearing of the whole tract was given, but the owner had to furnish the teams and drivers.

Every day of the trip furnished many interesting educational features. At one stop an old man, whose stooped shoulders, knotted knuckles, and lined sunburned cheeks told of the years of grubbing for stump roots, related to the dynamite worker his method of blowing out these huge molars.

Settlers Offer Valuable Ideas

"I WOULD put five sticks of 40 per cent dynamite under the center of this stump and do it with one shot," said the farmer pointing to an old hemlock.

Then the college dynamiter showed his way. Under each of the four root prongs, near the heart of the stump, he placed one stick of 20 per cent dynamite, costing three cents a pound less than the 40 per cent quality preferred by the farmer. With an electric machine the four stumps were fired at once, taking out the stump with one less stick and a cheaper grade of explosive. The farmer quickly saw that he was getting a cash dividend as a result of his visit to this one department. to this one department.

Over in the machine section, men showed how to hook on to stumps; some to be taken out by piecemeal after the center had been blasted to loosen the roots,

after the center had been blasted to loosen the roots, and others by hooking to the stump direct. A hand puller with 35 tons' power can get out an ordinary stump in from six to eight minutes. The big machine pullers can extract upwards of 200 stumps, eighteen inches in diameter, in a single day.

Sometimes these settlers, who have spent their lives clearing the land around their little homesteads, can offer valuable ideas. These were eagerly sought by the operators of the machines. They wanted the practical experience of men in order to winnow out the best methods. All of the new operations suggested were given trial and the results tabplated. A standardization of methods may result. standardization of methods may result.

Coincident with this trip the destruction of stumps

by other methods was the subject of experiments. One of the plans tried was to fill some of the green stumps near Antigo with a saltpeter solution on the theory that a year of permeation would put the stump in shape by oxidization of its roots so that it may be ready for burning within a year. Without any treatment it now takes several years. This is but an experiment, however, the results of which are still unknown.

At Mountain the agricultural school closed, so that the boys studying agriculture could get first-hand information of the methods used. Moreover, four hundred people were on the field the first day, and on the second day it was necessary to have informal traffic officers to keep the crowds back from the machines while being operated. Many of the farmers' wives were present, proving as anxious as their husbands in learning of modern methods for the clearing of land. At Antigo the operators were given a banquet by the citizens. At Crandon six hundred were

present the first day, and so it was all along the trip.

"This demonstration train was not started with any false or visionary theories in mind," said A. W. Hopkins, agricultural editor of the university staff, who was present at many of the demonstrations.

"The bigness of the problem was at once apparent. Any one system of stump removal will not always work on all kinds of soil and with all kinds of wood.

"It was just for this purpose—the making of a careful inventory of the land-clearing situation in Wisconsin, and gathering the ripe experiences of woodsmen, settlers and general farmers on the various ways of making the land to produce profitable agricultural crops in place of pine stumps—that the land-clearing special was organized. The great feature of the train was to show what machines and dynamite really could do in rooting out stumps."

Sixteen-Hour Day

By GEO. M. WEAVER

USED to think I never had any time to go to Grange, as it took all Saturday afternoon, and there was so much to do on the farm. I never had time to go to the county fair, farmers' institutes, evening gatherings in the neighborhood, or my lodge

For two years after I bought my farm I put in on an average of sixteen out of the twenty-four hours at work. In winter I worked in the woods drawing logs, and did my chores with a lantern at both ends of the

day.

The gray hairs got good and plenty in my hair,



Two-horse pullers will extract about 200 goodsized stumps a day

and I commenced to age fast. One day I read an article that said there was something wrong with the man who couldn't take a day off once a week from his

farm work to go to town, attend his farmers' meetings, or fix up the flower beds for his wife.

It went on to say that such a man never uses his head to help his hands. I got to thinking, "Was I one of those fellows?" and the more I thought of it the surer I was of my mistake.

I began going to Grange every Saturday afternoon.

I met my brother farmers, asked questions about their crops—when they sowed and planted—and learned a lot. Sundays I read my farm papers that I had always taken but could find no time to read walked no time to read, walked over my farm or to one of my neighbors, and planned my work for the coming week. I got a little book and noted in it the little things to do on stormy days in the workshop.

My boys began to be

some help to me, and when the work got on my nerves, so to speak, and the boys got tired of plowing, drag-ging, cultivating, and hoe-ing, we would drop everything, we would drop everything, drive eight miles to a trout stream, fish all day, and get just as tired as we would on the farm. But, oh, the change! It did us so much good. We could buckle into it the next day, and the works just melted. and the work just melted out of sight.

Since I right-about-faced I am doing half our work now with my head, and my work is better kept up, my crops go into the ground on time, and I don't feel so tired and worn out. We quit work in time to have the teams taken care of and be ready for our meals at meal time. We all like it better, including the wife.



One man and a hand puller will develop up to 35 tons of power, enough to pull an ordinary stump. Large stumps may be pulled piecemeal after shattering with dynamite

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The Editor's Letter

Editor Attends Hearing of Farm Loan Board



HIS is F. R. Wilson talking. I am the 'advance agent' for the Federal Farm Loan Board. We

are going to hold a hearing in Columbus next Wednesday, and we want you to come over.

"Much obliged to you, Mr. Wilson, for calling me up," I said. "I will be there."

So early Wednesday morning I picked up our county agent, W. E. McCoy, and drove over to Columbus in my machine—45 miles from Springfield, perhaps 50 by the route we took, and we made it in just two hours.

William G. McAdoo, Secretary of the Treasury and chairman of the Farm Loan Board, presided at the hearing. Our old friend and editor, Herbert Quick, was seated at his right. Captain W. S. A. Smith, who is also well known to the readers of Farm AND FRESIDE, sat at Mr. McAdoo's left. Judge Lobdell of Kansas was also present. Mr. dell of Kansas was also present. Mr. G. W. Norris was unfortunately absent. A more friendly, open-minded, and de-servedly popular board it would be diffi-cult to imagine.

As you may know, these men have been traveling from coast to coast holding hearings in the capital cities of each State (the South is yet to be visited), listening to farmers, bankers, attorneys, agricultural college professors, county agents, in fact to everyone who has anything to contribute to the fund of information that they are gathering to formation that they are gathering to enable them to administer the farm-loan

enable them to administer the farm-loan act more intelligently.

I wish every reader of FARM AND FIRESIDE could attend one of these hearings—not that every reader may want to borrow money under the provisions of this new act, but to listen in person to the clear, concise explanation of the act which Secretary McAdoo makes; to hear the testimony of the scores of witnesses who appear at every meeting to tell the board just what the conditions are that control farming operations in their States; how easy or how tions in their States; how easy or how hard it is to borrow money at all; how long or how short the lending term is on the average; what per cent they have to pay for a loan, and how much commis-sion; how much for a renewal; and how in turn each one of these items affects

the financing of their farms.

After McAdoo finished his explanations there were a dozen people on their feet at once, anxious to ask questions, which he answered clearly and quickly. Then the witnesses were called: farmers first, after them the bankers, attorneys, college professors, and financial experts.

THE testimony brought out the fol-lowing conditions in Ohio, and I have no doubt that some of them prevail in

most parts of the country:
First: That the farming business is on the whole undercapitalized. That too many farmers to-day are operating with so little capital that they are unable to swing their business successfully, and that they have to sell their products frequently at very low prices since they have not the resources to wait for a

favorable change in the market.

Second: That at the present time most farm loans are made for three or at the most for five years, and that three or five years is too short a period in which to complete the improvements for which the money is borrowed, to re-alize upon them and pay off a loan of any size. The possibility of failure to secure a renewal of such a loan is frequently mentioned as a reason for re-tarded development, or for unwilling-

ness to go into debt at all.

Third: That the rate of interest for the average small borrower, plus the charge for commissions, renewals, etc., makes money-borrowing much costlier than is generally believed, and that this cost, prohibitive for many farmers, is largely responsible for the tendency of farm lands to concentrate in large hold-

ings, for the increased percentage of tenants, and for all of the evils which follow in the train of such conditions.

"Now," said Mr. McAdoo, or sometimes it was Mr. Quick or Judge Lobdell who was interviewing a witness, "that is exactly the condition this bill is designed to remedy. If you have had doubted signed to remedy. If you have had doubts



as to your ability to renew your loan at the end of three or five years, and if you realized that you

good on your investment in that period—and most farmers have testified to us that they connect riod—and most farmers have testified to us that they cannot—you have doubtless been unwilling to take the risk of having a mortgage foreclosed, and have preferred to let well enough alone. But under the provisions of this act you can borrow any amount from \$100 to \$10,000 over a period of from five to forty years—ample time, you will agree, in which to work out the improvements you have in mind."

IT WAS surprising and gratifying to see how thoroughly the framers of this bill had studied conditions, and how adequately this measure seems to cover the American farmer's requirements for credit. At any rate, this audience of several hundred men—farmers, bankers and merchants alike—not only agreed upon the real need of a farm-loan bill, but also upon the soundness of the act but also upon the soundness of the act that has now been made a law.

The board in its turn called attention to certain customs and tendencies that exist to-day which must be dealt with if the new act is to accomplish all its possible usefulness. There is no doubt that in many sections of the country debt is considered a disgrace. And no one will gainsay the fact that going into debt for luxuries or pleasures before the farm is paid for is anything but disgraceful. On the other hand, going into debt so as to buy fertilizer, to improve the herd, to build a silo, to install water the herd, to build a silo, to install water and lighting systems, to purchase efficient machinery are signs of enterprise, and under the conditions of the new farm-loan act the fact that a man is able to borrow money from the Government for legitimate improvements will not only be a sign of enterprise but also a mark of credit. Debt and shiftlessness are one thing, proper working capital and enterprise quite another.

There is not a manufacturer or a mer-

There is not a manufacturer or a mer-chant that I know of who does not have chant that I know of who does not have to borrow money at some time of the year to swing his business. The fundamentals of all business are the same—farming as well as any other—and there is no disgrace in borrowing money in the farming business if money is needed for its development. The conditions under which money can be secured under this act are sound and businesslike, and there is no probability that shiftless, incompetent people can plunge themselves competent people can plunge themselves into debt by this route. The local board which passes on all loans forms a proper safeguard.

Another change which will come as a grateful relief to farmers is the fact that any responsible farmer can demand a loan, whereas to-day he has to ask someone for it, with the possibility of being refused on insufficient grounds. This, coupled with the ability to make a loan running five, ten, fifteen, twenty, or forty years, if you want to, is going to forty years, if you want to, is going to make many a farmer's sleep more sound.

Some people at the meeting said that farmers were going to hesitate to lay their business plans and needs before nine of their friends and neighbors, as will be necessary in forming a local borrowing group, but I believe that just as soon as farmers realize that money can be borrowed cheaply and for long periods by this method they are not go-ing to let false pride hold them back.

The afternoon meeting was devoted largely to a discussion of the proper location of a district farm-loan bank for this section of the country.

They have a big job on hand, and we must not be impatient or critical if it takes some little time for them to get things started. In all probability it is going to be several months before the board will be in position to extend loans, but in the meantime there is no recommend. but in the meantime there is no reason why you should not start work on forming a local group if you expect to borrow under the terms of this act, and on page 11 of this number you will find a short article telling you exactly how to go

The Editor

School District Holds Fair

Five Hundred Patrons See Local Products Win Prize Ribbons

By HARRY M. ZIEGLER

HAT a country school district can hold a suc-cessful fair, patterned somewhat after the county and state fairs, was attested by more county and state fairs, was attested by more than five hundred persons who attended the fair held October 8th and 9th last year by the Blue Bottom Welfare Club of the Strong District School No. 1, in Riley County, Kansas. Many of the exhibits were housed in the schoolhouse. The livestock exhibits and the judging contests were held on the school grounds. Many persons from near-by towns and school districts attended the fair.

Although the Blue Bottom Welfare Club was an unusually progressive and energetic organization.

Although the Blue Bottom Welfare Club was an unusually progressive and energetic organization, and had done a lot of mighty fine work, a few persons living in the district had their doubts about the Welfare Club being able to stage a successful two-day fair at the schoolhouse. But the number and size of exhibits, large crowds, and boundless enthusiasm stilled any talk about such a fair being an impossibility

The Welfare Club took the name Blue Bottom Welfare Club because much of the land comprising the school district either adjoins the Blue River or is in the lowlands near the Blue River. The school had the reputation for being a "live" one before the Welfare Club was organized. They built one of the most modern country schoolhouses in the State of Kansas. Since the Welfare Club has been organized, the district her forgat still forther about trict has forged still farther ahead.

The people belonging to the Blue Bottom Welfare Club, and living in the Strong District No. 1, have reason to be proud of their school and of the work

reason to be proud of their school and of the work they are doing. I mention this to show the kind of people who were back of the school district fair. The agricultural display was judged Friday afternoon. The baby show was held Saturday morning at ten o'clock. A foot race for men more than forty years old, a foot race for boys, a bicycle race, and a ball-throwing contest were held at eleven o'clock. The horse show was held at two o'clock Saturday afternoon, after which the live stock was judged.

Newspapers Lend Aid

ASIDE from being a success, the fair was unusual in three respects. No admission was charged; no fake side shows or questionable performances were permitted to exhibit; and no cash prizes were awarded. Four awards were made on every class of article or live stock shown. First place was designated by a blue silk ribbon bearing the words "First Prize." A red silk ribbon was used for second place. Third place was designated by a white silk ribbon. Sweepstakes was awarded to the best of all varieties or kinds in a class. "Second Prize" was printed on the red ribbons, and "Third Prize" was printed on the silk ribbons.

The silk ribbon, telling the place

a colt, calf, driving mare, a cake, jelly, or a coop of chickens won at the Strong District No. 1 Fair, meant a whole lot more to its owner than any two or three or five dollar prizes. Cash prizes weren't needed to stimulate interest, as is the case at many county and state fairs. The fair was well advertised. The newspapers in the near-by towns, because the idea was so new and unusual, featured the plans for the fair in their newspapers.

columns several days before the fair was held. Large placard announcements nearly the size of an ordinary

newspaper page were dis-played in the near-by towns and school dis-

This is what announcements told an eager public: "Blue Bottom Welfare Club Fair will be held at the new brick schoolhouse in the Strong District No. 1 October 8th and 9th. Competition will be open as long as we have space for exhibits. A special invitation is given to the College Hill and the Rocky Ford districts to compete. Anything in the way of farm products showing merit will be accepted. Ribbon prizes will be awarded by competent

judges. All live stock must be cared for by the owners. Horses and cattle must be halter-tied. Exhibits must be delivered to committees in charge by twelve o'clock Friday and remain until Saturday evening. Exhibits should be marked with the name and address of the owner. We will not be responsible for the exhibits, but will take care of them."

Then followed the list of premiums, and an announcement of the farm products that many of the members of the Welfare Club desired to sell.

The agricultural department was in charge of E. J.

members of the Welfare Club desired to sell.

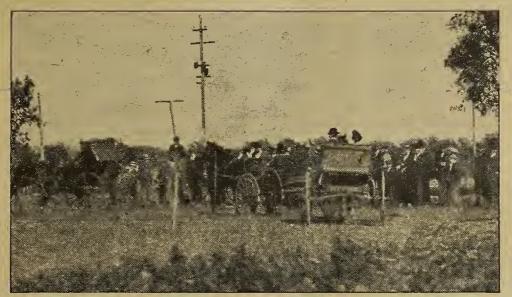
The agricultural department was in charge of E. J. Knox and R. J. Packard. In this department a first, second, third, and sweepstakes prize were given for each of the following: Best ten ears of white corn, best ten ears of yellow corn, best ten ears of calico corn, best ten ears any other varieties, and sweepstakes for best ear of any variety. A similar corn contest was held for boys of school age. This created a lot of interest and enthusiasm among the boys of the district. Similar prizes were awarded for best displays of cane, feterita, kafir, wheat, and oats.

Sweepstakes, first, second, and third prizes were given for the best of the following: Peck early Irish potatoes, peck late Irish potatoes, peck any variety, peck sweet potatoes, any variety of squash, pumpkin,

peck sweet potatoes, any variety of squash, pumpkin, watermelon, muskmelon, six white onions, six red onions, six onions any variety, six beets, six carrots, and six turnips. Similar awards were made for the best plate of an early variety apple, a late fall apple, and a plate of pears. Similar awards were made for the best quart of alfalfa seed, bundle of alfalfa hay, and bundle of prairie hay.

The live-stock department was in charge of C. B.

Whitmer. In the horse section prizes were offered for the best matched team of draft horses shown in harness, best draft mare or gelding, best weanling



This is the competition for the best single driving horse shown in harness and driven by a lady

draft colt under five months old, best general-purpose team, best match or cross match team shown in harness, best general-purpose colt five months old or under, best match roadster team shown in harness, best single driving horse shown in harness and driven by a lady, best roadster colt under five months old, and best saddle pony.

In the cattle division prizes were awarded for the

best milch cow, best dairy-bred female calf under six



The live-stock competition brought out some promising-looking colts. Here a prize-winner is getting his ribbon



Modern schoolhouse of Strong District No. 1, where the fair was held

months old, best dairy-bred male calf under six months old, best pail-fed calf any breed. Because the Welfare Club didn't wish to go to the expense of erecting pens for hogs and sheep, none were shown.

Mrs. Lena Knox had charge of the fancy work. Prizes were offered for tatted yokes, collars and cuffs, edgings and insertions; crocheted yokes, collars and cuffs, edgings and insertions and all other patterns; knitted doilies, edgings and insertions; embroidered centerpieces, doilies, pillows, dresses, waists, and lingerie; and quilts of all kinds.

Mrs. Mira Currie had charge of the house plants. Prizes were offered for the best collection of five varieties of potted plants and the prettiest bouquet.

varieties of potted plants and the prettiest bouquet.

Professor Failyer had charge of the poultry department. Prizes were offered for the best and second trio of every breed of chickens, ducks, turkeys, geese, and for the best dozen brown eggs, and the best dozen white eggs.

The pet stock department was in charge of Mary Nixon. The first and second prizes were given for the prettiest kitten or cat, canary birds, pigeons, dogs, Shetland ponies, and any other pet stock.

Products for Sale

A. M. JORDON and Mrs. Carl Better Babies contest. Prizes were given for the highest scoring baby under one year, under four years, prettiest girl under five years, and the prettiest boy under five years.

The culinary department was in charge of Mrs. Worth Nixon. Prizes were given for the best cake of any kind, the best loaf of bread, the best pie, and the best cokies. A similar contest was held for the girls of the

A very interesting part of the an-nouncement of the fair was the farm products that many members of the Welfare Club desired to sell. For instance, James Iles wished to sell 1,500 bushels of corn, 40 tons of alfalfa, 50 bushels of potatoes. Cal Smith wanted to sell 100 tons of alfalfa in the shed, and 200 bushels of notatoes. Campbell Brothers

Smith wanted to sell 100 tons of alfalfa in the shed, and 200 bushels of potatoes. Campbell Brothers wanted to sell four milch cows, two bulls, a cream separator, and pure-bred White Leghorn cockerels. Carl F. Pfuetze had selected seed corn for sale, and Swiss Toggenburg goats. J. S. Montgomery wished to sell 100 tons of alfalfa hay. E. J. Knox desired to sell four hogs, alfalfa, and prairie hay, 500 bushels of old corn, and a steam engine. Harvey Dane wanted to sell a good pair of mules and 100 bushels of corn; Worth Nixon a wood-frame 250-ton silo. G. H. Failyer offered for sale seed sweet corn and ducks.

and ducks.

Ralph Goheen wanted to sell a Shepherd dog and chickens. William Richards wished to sell a two-year-old mule, draft gelding, and seed corn. F. E. Blockolsky wanted to sell prairie hay, alfalfa hay, corn, and a good three-year-old mule. George M. Stevens had Jonathan apples, 500 bushels Winesaps, 100 bushels of potatoes, and Indian Runner ducks to sell.

Charles Currie wanted to sell hogs, chickens, eggs, alfalfa hay, and corn. Charles Savage had a mare he wished to sell. A five-year-old driving mare and spring pigs were offered for sale by Jerome Stewart. A. M. Jordon carried an announcement on the placard saying that he was a breeder of Jersey cattle, Percheron horses, and Buff Orpington chickens.

Thus the fair was not entirely an educational exhibit, but it has a practical side which appealed especially to the men. The good will and support of the men are important assets. support of the men are important assets in any school district.

In most little red schoolhouses a fair of this kind would have been impossible. But the modern community schoolhouse means bigger things all around-bigger attendance, bigger ideas,

and greater interest on the part of patrons.

Besides, there is the neighborly and friendly interest that is not possible at larger fairs with their race-track features and the close rivalry

This account is not given as a pattern for other school districts to follow, but it does suggest a way to bring a community together in a sociable and profitable manner and getting better acquainted with each other and the new kind of school.



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October 21, 1916

A Tax Advantage

THE farmer has some very specific appreciated. One is that he automatically dodges the income tax law when people equally well to do, in town, must pay it.

A large part of the product of the farm is consumed without ever being turned into cash, or otherwise made accountable in a balance sheet. A man in town with \$4,000 income gets it in money, and must pay an income tax for getting it. A farmer in like circumstances would get his rent, meat, flour, vegetables, fruit, automobile-riding, etc., without turning over any cash, and therefore without having to list these items in his showing of income. He 2.7 gallons less of intoxicants per capita enjoys the income, but, not seeing it in consumed than in the preceding year. cash form, doesn't have to pay on it.

Power vs. Backache

THE greatest thing for the farmer L that has been introduced of late years is gasoline. It may not greatly help the consumer of farm products, nor increase the farmer's profits abnormally, but there's no end of work that a gasoline engine will do that ought to be done just that way.

A visitor at a 200-acre farm recently was attracted by the fact that the farmer was sixty years old, straight, lithe, and athletic. "How have you managed it?" he was asked. "Easily," was the reply. "I've refused to do unnecessary

On that place he has three gasoline engines, besides his automobile. They're hooked up to all manner of contrivances. They pump water, fill two silos, milk the cows, shell corn, and provide electric lights. There's a small one in the workshop that turns the grindstone. The farm is too rough to be cultivated with a tractor.

hood for being a good farmer. He has show he is still in the game and that ture. He hasn't accumulated wealth ter! any faster than some of his neighbors, but he does get a lot more out of living, for he flatly refuses to drudge. It is especially worth while to mention that gasoline churns, separates milk, and runs laundry apparatus for his wife. She is as devoted to it as he is, and looks as young as he does.

Freak Crops

cocklebur, which is so cordially despised, might be. and make a good profit on it.

its use. Weavers of woolen cloths use the burs in finishing their fabrics. A bunch of the burs, pitched loosely on a piece of new cloth and tossed about for that on a hard-surfaced road a heavy, a few minutes so that the prickers establish contact with every bit of the cloth's surface, serves to lift up the nap and give the finished effect that is for fun." necessary to show the goods most at-

found too sharp.

market for them is sharply limited; competition would overstock it, and there would be absolutely no sale for those in excess of the pretty steady de-

Active Tick Work

ORE than a half-million head of IVI cattle were dipped in the months of April, May, and June last, in the section of Louisiana now systematically working for the extermination of cattle tick. In addition to this work, other districts of the State are getting ready for systematic work to begin next spring, and 300 dipping tanks have been prepared and are being used preparatory to the systematic work to be begun

At its last session Louisiana passed a A advantages that are not altogether state-wide tick-eradication act which, it city people to use."is believed, will soon result in eradicating the tick throughout the State where this line of work has not yet been systematically carried on. This is the kind of state legislation that really helps.

Booze Bill Dwindling

OLD figures from an unprejudiced source are what really furnish an authentic verdict as to whether increase of dry territory decreases the consumption of alcoholic drinks. The last government fiscal report, including the first half of 1916, shows that there were One hundred million dollars less was paid out for drink in twelve months by the American people than during the previous year.

In the consumption of beer there was a decrease of ten gallons for each fam-Even with this reduction, Uncle Sam's records show there was a total expenditure for intoxicants in twelve months of over a billion and a half dollars-seventy-five dollars for each family.

A comparison of the money going into the building of churches and liquormaking plants is an interesting side light on the question. In 1905, for every dollar expended for new church buildings there were \$2.80 put into new breweries and distilleries. In 1915, for every dollar put into new liquor-making plants there were \$38.20 put into building new churches in this country. There of artificial leather are unquestioned. were \$14,000,000 less invested in the construction of breweries and distilleries in the past ten years than in the decade preceding 1905.

It is now evident that John Barleycorn is mortally hit, but he is working That man has repute in his neighbor- his publicity bureau as never before, to served two terms in his State's legisla- when a State goes dry it becomes wet-

A New Road Plan

THE secretary of state of New York, I Mr. Hugo, has been proposing some notions about paying for good roads, sider it the ablest article yet written that will appeal to most of us. He says the people who wear out the roads ought to pay for the wear they inflict.

So he proposes a system of licenses that would be based on accurate, scientific study of the wear and tear caused THE most curious agricultural crop by different kinds of vehicles—automoraised in this country, of which we biles, trucks, wagons, traction engines, have heard, is produced by a few farm- and wide tires and narrow. He would ers around Syracuse, New York. They undertake to make every vehicle pay its raise a bur that is very similar to the own way on the roads so nearly as

Under this project the mileage, Few people ever heard of this bur or weight, speed, power, character of tires, etc., of every vehicle would be appraised, and the license would be adjusted accordingly. Everybody knows high-powered car running very fast does more damage than anything else. Very likely that car is running "just

tractively. Nothing else has ever been for the fun, and the average farmer, found to do it so well. Steel burs were who doesn't much care about having his land taxed to build fine roads for The burs are sold in England. The the city people to speed over, will quite

> The other day one Western State nominated a candidate for governor on the platform of opposition to good roads. He went out among the farmers and said in substance:

> "This good-roads clamor represents the effort to make the farmers build expensive roads for the town people to run their pleasure cars over. It would be a great thing for the city motorists if the farmers of this State would allow a bond issue of \$100,000,000 to pay for playground roads, but the farmers would pay most of the cost, and the townspeople would get most of the fun. I'm for a good-roads policy that will give the rural districts what they need; not for one that primarily means fine roads for the farmers to pay for and the

> That wasn't a very fair statement of the case, but it appealed to the farmers of that State, nominated that candidate, and set back the good-roads movement in that State a decade or two.

> Secretary Hugo has the germ of an idea that is worth working out. It will help get roads for the whole country, if such a scheme of everybody paying for what he uses can be applied to roads.

Artificial Leather

THAT are we going to do about the leather situation? Are we going to keep on demanding genuine leather until prices are up to the point when all but the rich must go barefoot? For a generation leather has been growing scarce. But the idea of using anything called an imitation or substitute hurt our pride, and in some cases warped our judgment.

Artificial leather is a fabric treated and coated in the course of manufacture so that it looks like leather, feels like leather and, besides, is washable, waterproof, and uniform in thickness. It is made to resemble Spanish leather, pebbled grain leather, and many other finishes.

Millions of yards of it are annually used for upholstering the seats of railroad cars, carriages, automobiles, couches, and chairs. It is excellent for bookbinding because it stretches uniformly and takes ink well. The service and good appearance of the best grades

We have found concrete, which is merely artificial stone, to be better for many purposes than genuine stone. Besides, it is cheaper. In similar manner let us give artificial leather its due.

Our Letter Box

Agrees with Ozark Letter

DEAR EDITOR: It was with pleasure and interest that I read your letter in ARM AND FIRESIDE of July 15th. I conabout the Ozark region of Missouri.

All you say about the Ozarks is true. A man of energy and some ambition can do well here. It is a fine place for diversified farming. Fine for stock of all kinds, as we can pasture nine months out of the year. Great for sheep and poultry. C. D. MAULIN, Missouri. poultry.

An Unfair Husband

DEAR EDITOR: Without preamble let me tell you about my venture in making a little money on a side line. About forty-five years ago, in Wisconsin, I took my weekly budget of butter and eggs to the store four miles distant, driving the double team myself, bought my groceries, and had a little money left to bring home. I stopped at a farm-house on my way home and bought a small white pig for 75 cents. I carried

it home in my lap.

I fed that pig early and late, and it grew as a good pig does. This was in May, and the next March my pig was the proud mother of ten little white or fun."

pigs. When they were a month old I

Mr. Hugo's plan would make it pay refused an offer of a dollar apiece for

the pigs and \$11 for the sow. That fall my husband dressed seven of the pigs, hauled them to town, and sold them on the street for \$10 apiece. This made \$70 cash income with the old one and three of the early litter on hand. The four hogs were easily worth \$50—more than the value of all they had eaten.

My husband thought the 75 cents well invested. He gave me four dollars of

invested. He gave me four dollars of the seventy and told me the rest of the money he could take care of without any outside advice.

MRS. D. E. JONES, Iowa.

Likes Practical Helps

DEAR EDITOR: To do without FARM AND FIRESIDE after once getting acquainted with it would be entirely out of the question. Your views suit me exactly. I hope you keep up the work, for you are doing a great deal of good. Your farming suggestions are very practical for us here in this rough and rocky section. You don't fill the pages rocky section. You don't fill the pages of your valuable paper with high-priced theories that a poor farmer could not follow. Of course, these are all right if the farmer has money and well-lying land. But as we lack both, you see it is useless. We are compelled to resort to the slower and old-time way of building up our soils and raising and gathering crops, to a great extent.

CLARE SHEPPARD, West Virginia.

Buy Coal Direct

DEAR EDITOR: Thirty-eight farmers' co-operative elevator companies in northern Illinois have contracted for over 1,000 cars of coal from a big coal operator of Chicago.

The thirty-eight farmers' organiza-

tions, by agreement, placed the buying of their winter's coal supply in the hands of Mr. Joseph Henebry, manager of the Plainfield (Illinois) Grain Company, who has the coal shipped direct to the farmers' companies needing it.

By this plan Mr. Heneby was made the buying agent for all of the thirtyeight farmers' organizations. Needless to say, there was a satisfactory saving in this big wholesale coal purchase.

These farmers' organizations now an-

ticipate the day when a sufficient number of them can buy the entire output of a coal mine and enable the operators, miners, and coal consumers to profit by such close linking up of the farming and mining industry.

HENRY LYMAN, Illinois.

Growing Cane in Cuba

DEAR EDITOR: It was with a great deal of pleasure that I read the article in the FARM AND FIRESIDE telling of the great prospects in cane-growing in Cuba. Having lived in Cuba nearly twelve years, I feel a great interest in the little isle.

The article on cane-growing was very cod. The pictures were splendid. But I must differ from the writer in regard to there being so little work necessary in the fields. True, the ground is worked very little when the planting is first done, but to raise a good crop of cane and get cutters ever to go in it, it must be gone through with the hoe soon after cutting. Weeds will surely come up through the strippings if the cane does. It must be stripped of dead leaves at least twice during the year, and the same number of times with the hoe. If it hurns the care is still greater it burns, the care is still greater.

My home was in the Oriente Province,

where a great amount of cane is raised. In regard to the grower leaving the cutting to suit his convenience, he is only too glad to get it cut early. If the rains come on—well, Cuba has the muddiest mud that ever man tried to walk through. It certainly stops cane-haul-

Suffice to say, there are great possibilities in cane-raising in Cuba and great possibilities in many other things.

MRS. ALMA CLARY, Ohio.

Asphaltum for Grafting

DEAR EDITOR: In my letter telling you about the peach-borer experiment with asphaltum, I think I mentioned that we used asphaltum instead of grafting wax, as it does not require to be wrapped. I find, however, that it does not do to graft in warm weather, as the sun causes the asphaltum to run between the bark and so prevents the as the sun causes the asphaltum to run between the bark and so prevents the scion from taking. To remedy this it is necessary to use about one-third resin with the asphaltum. Trees that were grafted early, while the weather was cool, were all right, every one grew. Others that were grafted in February, during a warm period of several days' during a warm period of several days' duration, all failed on the south side of the tree. The hot sun caused the asphaltum to run between the bark and so prevented a union in taking place. I am always willing to give to others the benefit of my experience, as I consider I get more from your excellent paper than I give. SAMUEL HAIGH, California.



Crops and Soils

Tile-Drain Outlets

By George Barker

DID you ever notice how many tile drains were almost useless because of the bad condition of the lower end of the tile? There are a lot of them not doing their duty, and therefore not yielding anything on the investment just because of this.

An oil worker near here bought a farm and had to tile it. He saw the trouble, and used pieces of old cast-iron well casing with which to finish the end of his drains. A length of casing was cut two or three times, and connected securely to the end of the tiles farther back in the drain.

On our drains where the cattle have tramped the dirt and sods down in and over the outlet we have replaced with the two-foot glazed sewer tiles. These do not crack off easily by freezing, and extend back far enough in the ditch to extend back far enough in the ditch to hold themselves in place even if some of the soil on the bank of the outlet ditch is washed away. However, I do not think this is as good an ending as the cast one is for all-around use.

Another idea about tile drains is to have them deat are registed.

have them slant or point a little downstream. Possibly this doesn't seem reasonable to engineering experts, but old ditchers who have been in the business for almost a lifetime always give this slant. They claim it helps the drain to draw better.

Some Short Cuts

By L. E. Armour

NOTICE that here in the South time is considered less valuable than in the North; for example, where manure spreaders are not used the common practice is to fork the manure from wagons into piles, then later to handle it all over again in spreading. My plan is to haul manure with plank wagon beds and sides, then rake and dump manure into piles rapidly when not spreading direct from wagons. The spreader is of course the best solution, but my plan saves a lot of time.

Sweet-Potato Storage

In harvesting corn, more than half the people here pick the corn, throw it into piles, and later again handle it over in the loading of the wagons. We pick the corn direct into the wagon, a man on each side picking two rows and a boy the middle row as the wagon passes over it. By unloading with a scoop, short work is made of this job. I estimate our plan saves one man's time and is the next best thing to corn-harvesting machinery.

Sweet potatoes in this section of Louisiana (Sabine County) are a staple crop, but I find that many people lose their entire crop every year, either by leaving them in the ground too long or allowing the frost to injure them after housing. Others build too tight storage houses, where the potatoes become over-heated and soon rot. Our storage house is just a simple frame building, with board siding without battening over the cracks, yet we keep potatoes ten months of the year in good condition.

We dig our potatoes just before the first heavy frost, so as to be able to save

the vines for fodder. In any event, we dig as soon as the vines are killed by the frost, and use a cultivator to collect the vines into bunches. The vines from several rows are dragged into one middle, and by the time the potatoes are dug and housed the vines are ready for storage for fodder. A one-horse turning plow is used for digging potatoes for the first operation, and a two-horse middle burster to complete the operation.

Our potatoes are sorted into three grades when picked up, making sure that the potatoes are dry when stored. The best grade is stored for future selling and home use, and the poorer grades ing and home use, and the poorer grades are stored near the entrance for stock feeding and immediate home consumption. If the bulk of potatoes is large, a ventilator made by nailing four boards together extends up through the potatoes from the floor to the top of the pile, taking pains to have the joints loose enough readily to carry away the moisture. Our potato storage house has no floor, and the potatoes are never covered, except when frost threatens, then they are covered with straw blankets or they are covered with straw blankets or burlap until the danger of frost is over. Then the covering is removed.

Value of Sweet Clover

By C. B. Hutchison

THE chief value of sweet clover for Missouri conditions is as a green manuring crop. Being a legume, it has the power of gathering nitrogen out of the air and storing it in the soil by means of the bacteria which live upon its roots. Since it makes such a heavy growth and does well on thin lands, it makes a good crop to turn under to improve the soil.

The value of sweet clover as a pasture or hay crop is much disputed. Some farmers regard it as practically worthless, and consider it a weed, while others apparently have had good success with feeding it. Its foliage has a bitter taste due to the coumarin it contains, and its stems have a tendency to become woody as they mature. If not allowed to become too rank before pasturing, or if cut for hay before the first bloom buds appear, these two objectionable features may be avoided to a considerable extent and very good feed obtained. It has been found, too, that stock will learn to eat it, and after being fed or pastured on it do not object to the bitter taste as at first. Since it is a biennial, sweet clover may take the place of red clover in the rotation on those lands where the latter does not thrive well, but on the best lands it cannot compete with either red clover or elfelfo for here

cannot compete with either red clover or alfalfa for hay.

The fact that the bacteria in the nodules on its roots are capable of inoculating alfalfa has led to the idea that it is a valuable crop to occupy the land immediately before seeding alfalfa. This may sometimes be done, but usually lands that have never grown sweet clover need inoculation for it as well as for alfalfa. It has been found necessary to inoculate the soil on the experiment station field at Columbia for sweet clover, and even with this precaution considerable difficulty has been experienced in getting a stand. It is evident, then, that it is frequently more difficult to obtain a good stand than one might expect from a general survey of the habits and characteristics of the plant.

How Things Grow

ALL living things are made from living cells. These cells correspond in a way to the bricks of a building. Most of them are shaped like bricks, and with a strong microscope you can see that

they fit together in an orderly way.

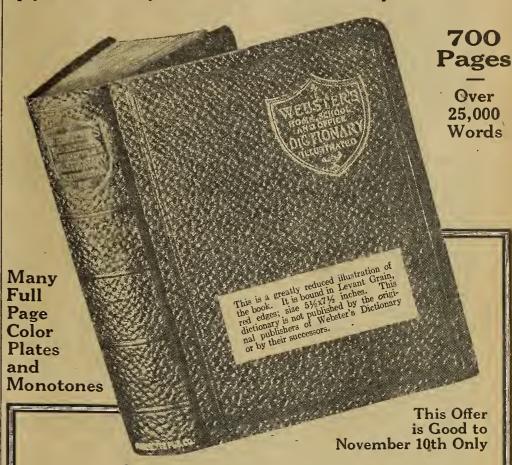
Plants and animals grow as these cells increase in number, which they do rapidly until maturity. Some cells in the trunk of a tree have thick, strong walls; those in the leaf are weak.



These men are grinding up limestone rock to apply to sour soils. It is profitable

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Contains New Words and Phrases

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The Country School

Rural Districts Can Afford Good Teachers

By JUDSON C. WELLIVER



shock.
"The country can better afford to pay for good schools than the cities and towns can," he declared. "It merely doesn't do it. But it's awakening to its ability and its needs."

There was something to think about. Nobody had ever put it in just that way to me before. A good many years ago, teaching a country school myself, I had started thinking on that subject. I had got just far enough to assume that the country school inevitably had be be a poor school; had-presumed, as most folks do, that the country couldn't afford better schools.

better schools.

Now, the facts are, as Mr. Claxton was prepared to show with figures, that the country districts possess an amount and a distribution of wealth that would enable them to have schools just as good or better than those of the towns, if only the country realized it and wanted the schools. The country isn't any longer poor. Its public debts are small compared to those of cities and towns. Its tax rate is small, in the same compared. parison.

The country gets what it really wants, nowadays. If it wants good roads, it builds them. Some of the best systems of country highways are in the States that have worst country schools. Some of the States where the farmers own most automobiles provide the poorest educational opportunities for the farm

Why is that? Because, to put it bluntly and not too pleasantly, too many people living in the country have been thinking more about roads than about schools; more about automobiles than about their children.

We hear a lot nowadays about how

about their children.

We hear a lot nowadays about how good roads are going to help provide better schools in the country. But it would be just as true if the order were reversed; maybe truer. If the whole rural community would suddenly get carried away with the ambition to develop good schools, think how soon that would be made an excuse to provide the good roads!

You can't have good country schools

You can't have good country schools without good roads; but you can get good roads without good schools; and in altogether too many regions that very thing is happening.

Two or three decades ago there was

some excuse for the comparatively poor schools in the country. To-day there is mighty little. There was a time when taxes that would make good schools. That time is past. In the years from 1900 to 1915 the value of farm property in the country increased from twenty to almost forty-one billions of dollars.

THE farming community has been PHE farming community has been paying a bigger and bigger tribute to the town schools, year after year, for the privilege of sending its children to town schools. The farmer who pays taxes to help support a school in his country district that isn't good enough to send his children to, and then pays tuition and other expenses to send the children to a town school, is paying twice. In addition, he is hurting his own community. own community.

own community.

Suppose there were two towns, eight miles apart. One had good schools, the other bad. The people in the bad-schools town sent their children off to the other town to school; at least, all that could possibly afford it did. Anybody can see that these people would be paying twice: once, in taxes, for the bad schools at home; again, in tuition, for the good schools in the other town. Nobody would want to live in the bad-schools town, and it wouldn't grow.

town, and it wouldn't grow.

That's exactly parallel to the conditions as between town and country. The country does itself an injustice whenever it denies itself good schools.

Conditions are getting better, but they're doing it too slowly. The tene-ment situation in the cities is im-

away from the country and into the towns, in order to give their children better educational opportunities?"

I asked the question of P. P. Claxton, United States Commissioner of Education.

"They shouldn't," he replied tersely. Then he proceeded to administer the shock.

"The country can better afford to nay are simply not keeping up in the race: are simply not keeping up in the race; that's all there is to it.

But they are coming along. North Carolina has in ten years doubled the number of days in the rural school year. The average number of days in the school year is growing generally in rural schools. It averages 135 in the country schools of the whole country, and 175 in the town schools. Yet New England provides an average of 180 days a year in the country schools.

THE number of days in the school year is of course a poor test of the real efficiency of the schools. Cities and towns demand teachers with high-school and normal certificates and some years' experience. The country breaks in teachers who afterward serve the cities. In reality, the country schools need experienced teachers vastly worse than do the towns, because the latter are better or-

In town there is careful grading of the pupils, so that the teacher becomes a specialist in the work of particular classes; in the country the teacher must deal with everything from the alphabet to branches that often are taught, in towns, only in the high schools. The country teacher is principal, supervisor, and teacher all in one; the town teacher has the benefit of the organization, direction, and experience of all these factors.

A survey of North Dakota schools recently showed that, the average teaching experience of country teachers had been two years; the average for town teachers, six and one-half years.

Those proportions will hold generally throughout the country. To make matters worse, the normal schools are organized with a view to preparing teachers for work in the towns, not in the country. Yet the country teachers really need more careful preparation than those in the towns, by reason of the superior organization of town schools.

Mr. Claxton pointed out another trouble with the country schools. He said that 70 per cent of all teachers in coun-try schools will this year be in new schools. They move around too much, chiefly because of the difficulty of get-ting desirable places to live. To make it more complicated, it is often harder for the teacher to get a boarding place after the community grows prosperous than it was before. People don't want to bother with "boarding the teacher" unless they need the money. The teach-

to bother with "boarding the teacher" unless they need the money. The teacher is too often compelled to live in the least desirable place, and doesn't come to be a part in the community life at all.

Then again, the courses of study in country schools have no special relation to country life; in the towns they have that relation to their community. We read a lot about the "simple life" of the country, which is all nonsense. The most simple life, industrially considered, is that of the town; the most complex, that of the country. In town a man earns his living doing a certain thing. Maybe it's the set of motions that run a street car, or serves a weaving machine, or operates an elevator, or lays chine, or operates an elevator, or lays brick, or runs a typewriter. Anyhow, compared to the wide scope of things a farmer must know something about, the man in town doesn't need to know much.

The farmer must be something of a scientist; he confronts problems in physics and chemistry and climatology. He needs to be a pretty good book-keeper, something of a botanist; a good deal of a machinist nowadays. Enough for practical purposes about hydraulics, engineering, architecture and building is absolutely necessary if he would handle his problems in drainage, road construction, and erection of buildings. He must know a good deal about markets and marketing, and buying and selling. Commissioner Claxton outlined this marvelous scope and complexity of the farmer's business to me, and then with

a tone of disgust exclaimed:
"They call that the simple life! Why, I have seen an operative living in a city who for ten years had never done a thing except sew on the left cuff of a shirt! He wouldn't have known how to snirt! He wouldn't have known how to sew on a right cuff; somebody else had been doing that for the same ten years. I've seen a man who had not for years done a single thing except to beat one particular piece of iron in a certain way, to go in a certain place in an automobile, and he didn't know where it fitted into the machine or what it was for!"

for!"
The country school could be made the ideal school, in a vocational way, as Mr. Claxton pointed out, because it is based on the idea of training for a single vocation. The town school doesn't know for what it is training its pupils; there will be blacksmiths, capitalists, horse doctors, pharmacists, engineers, hotel keepers, and a thousand occupations represented in the enrollment of a city school; but in a country school, if it is properly adapted to its community, the basis will be training in the things that will adapt a child to country life.

A Made-Over Living-Room

[CONTINUED FROM PAGE 3]

chairs, upholstered in quiet brown and green, invitingly beside it. These two chairs, the table, and a sectional bookcase were the only new pieces of furni-

ture she bought.

Two rockers and two straight-backed chairs of Colonial design harmonized very well with the rest of the furniture.

The pictures were the last consideration, and after Clara had studied them

carefully she chose three, none of which had to be reframed, and had them hung on two straight invisible wires from the molding.

"It's good," thought Clara when it was all done, and she surveyed her completed handiwork. And Mother and Father Evans evidently agree with her, for the kitchen has been abandoned as a sitting-room, and Clara's living-room is a bright, clean, and restful refuge from field or kitchen scenes of toil.

EDITOR'S NOTE: If you want suggestions on remodeling an old room or furnishing and decorating a new one, write to the Household Editor, FARM AND FIRESIDE, Springfield, Ohio. Your inquiry will be answered promptly by personal letter.

How Loan Act Works

Do You Want Uncle Sam to Help You Finance Your Farm?

prospective farmers, the opportunity to reduces the overhead cost of operation.

amounts from \$100 to \$10,000, and the not mean to make good. mortgages may run from five to forty loan during its life.

ers is secured by the sale of bonds of out to form an association. the twelve federal land banks. There is per cent between the price of the bonds and it has made arrangements with the and the price of money to the farmer. United States Treasury Department to four per cent, the farmer may borrow touch with the organization department money for five per cent or less. The of the federal land-bank system. It is margin charged pays only the actual publishing a coupon herewith. Farmers cost of operating the banking system. who sign this coupon do not bind them-The Government supplies the money to selves in any way, but merely indicate provide the banks with their original that they want to make a loan and ask capital, so that the inauguration of the that their names be filed as prospective system will not wait upon the sale of members of a loan association.

tem, farmers must get together in this coupon a copy of a booklet "How to groups of ten or more and form local Form a National Loan Association." national farm-loan associations. That The names will not be published, but means that if John Smith, a farmer, will be turned over to the organization wants to borrow money from a federal land bank he must find at least nine The organization department will then other farmers who want to borrow. group the names by States and counties, These ten farmers form an association, and will be better enabled to bring inelect officers, and petition the banks for terested farmers together. loans. An appraiser then views their farms to make sure of the security, and, ested sign it and mail to FARM AND if satisfactory, authorizes the execution FIRESIDE, Springfield, Ohio. FARM AND of the mortgages. Congress had several FIRESIDE will see that the names are objects in mind when it required the kept confidential, except as to their use farmers to get together and borrow in by the U.S. Treasury Department:

THE new Federal Farm Loan Act groups. This system insures a quicker grants to responsible farmers, or volume of business for the bank and get money on long-time loans at a low Manifestly an appraiser can view ten farms in a community almost as cheaply The use of this money is limited to as he can inspect one. Then, too, each actual, working farmers. It cannot be farmer is made responsible for the used by landlords or real-estate specu- loans of the whole group to a very small lators, and the money borrowed must be degree-only ten per cent, at the most, expended on the mortgaged land either of the amount of his particular loan. for the purpose of paying for the This will have a tendency to exclude land or providing it with needed im- worthless risks, because farmers will provements. Farmers may borrow in not join groups containing men who do

Now, the great problem in getting the years, at the option of the borrower. American farmers to take advantage of The interest must be paid, and annual this system is to assemble the farmers or semi-annual payments must be made in groups. One farmer will not know on the principal sufficient to pay off the what other farmers in his community desire to make loans, and he will not The money to be loaned to the farm- know whom to approach when he sets

FARM AND FIRESIDE wants to be of to be a margin of not more than one service to its readers in this project, That is to say, if the bonds will sell for put any of its interested readers in

The United States Treasury Depart-But to make use of this banking sys- ment will mail to each person who signs department of the federal land banks.

Here is the coupon; if you are inter-

Springfield, Ohio.
I hereby request that you forward my name to the United States Treasury
Department as a prospective member of a national farm-loan association. I would like a copy of the booklet "How to Form a National Farm Loan Association."
The a copy of the sounds are a same a substant from the sound soun
NAME
IVADLE ,
Post-Office
rost-office
· · · · · · · · · · · · · · · · · · ·
COUNTY
STATE

"It's not so important that WE are for Mr. Wilson— MR. WILSON is for US."

President Wilson's Record of Service

- -to the Farmer
- -to the Country
- -to Humanity

Demands Your Support

We have never had a man in the White House who so thoroughly represented ALL the people of this country as the man who is there to-day. Representing no interest of special privilege, he has the interest of ALL at heart. He has been steadily and steadfastly "on the job" for us. Even now when the Republicans are doing all in their power to be-fog the issue, criticize and misrepresent his actions, impugn his motives—he has gone steadily on, giving his time to the duties of his office rather than campaigning for re-election.

President Wilson does not ask for a vindication of his administration by re-election to office. He does not ask for four more years for personal satisfaction—but the country demands it, because the country needs him.

He stands on his record and his record is clean—a record of servicea record of deeds, not words.

Space is too limited to give it in full but as an illustration, look at this record of service to you, the Farmer. Then remember that the same keen insight into conditions—the same rare courage that has achieved this bettering of conditions for you, has guided the administration's legislation for the benefit of the whole country and humanity. Here is the

President Wilson Has Maintained Peace With Honor

NO GREATER service was ever rendered to any country by any man in any time. This alone warrants your support of him. But this is not all. On the record of his administration's service to you, see what has been accomplished. In brief, here is the record:

- Appreciation of the importance of agriculture has been shown through greatly and intelligently increased appropriations for its support.
- Greatly increased provision has been made, through the enactment of the Co-operative Agricultural Extension Act, for conveying agricultural information to farmers.
- Through the Office of Markets and Rural Organization, systematic provision has, for the first time, been made toward the solution of problems in that important half of agriculture which concerns distribution, marketing, rural finance and rural organization. The appropriations for this office, including those for enforcing new laws designed to promote better marketing, have been increased to \$1,200,000. Through the Office of Markets and
- The United States Grain Standards Act will secure uniformity in the grading of grain, and enable the farmer to obtain fairer prices for his product.
- The United States Warehouse Act will enable the Department of Agriculture to license bonded warehouses in various states. It will lead to better storage facilities for staple crops and make possible the issuance of reliable warehouse re-

- ceipts which will be easily negotia-
- The Federal Aid Road Act will conduce to the establishment of better highways and better marketing.
- The Federal Reserve Act benefits the farmer by guaranteeing better banking, safeguarding the credit structure of the country and preventing panics, making larger provision for loans through national banks on farm mortgages and by giving farm paper a maturity giving farm paper period of six months.

The Federal Farm Loan Act

It was essential, however, that banking machinery be devised which would reach intimately into the rural districts, that it should operate on terms suited to the farmers' needs, and should be under sympathetic management. The need was for machinery which would introduce business methods into farm finance, bring order out of chaos, finance, bring order out of chaos, reduce the cost of handling farm loans, place upon the market mort-gages which would be a safe in-vestment for private funds, attract into agricultural operations a fair share of the capital of the nation, and lead to a reduction of interest. These needs and these ideals have been met by the enactment of the Federal Farm Loan Act.

So much for legislation. This is not all, but it is enough to indicate what has been accomplished. Now consider what just one recent act of President Wilson has done for the farmer.

Preventing Nation-Wide Railroad Strike Saved Millions!

Despite the perverted arguments of opposition spell binders and fact-twisters, the cold figures show that President Wilson's work in preventing a nation-wide railroad strike saved tens of millions of dollars for the farmer, without injustice to any class.

Take the value of the 1915 crops of apples, peaches and potatoes (comparatively perishable crops). The 1916 figures will greatly exceed them. Had the strike lasted only a week, shipments would have been thrown off schedule for a month or more—and at a minimum, 33½ per cent of these crops would have been runned. In the States of Washington, Oregon, California, Idaho, Montana, Utah, Colorado, Kansas and Missouri alone the value of 1915 Apples, Peaches and Potatoes was \$82,875,-380. A railroad tieup of one week would have meant a dead loss to FARMERS of at least \$27,000,000.

The Republican Party buncoed and bamboozled the farmer—that Wall street and allied interests might be benefited. The Wilson administration has fought the farmer's battles for him. The 1915 value of farm crops and livestock products amounted to \$10,500,000,000, as against \$9,300,000,000 in 1912—a gain of \$1,200,000,000, notwithstanding Republican prediction that Democratic administration would ruin the farmer and the prices of his products.

The Farmer Is Too Sensible to Exchange the Substance for the Shadow—Too Wise to Give Up Prosperity for Promises.

That's Why the Farmer Will Vote to Retain President Wilson

This advertisement is published and paid for by the Democratic National Committee, 42d Street Building, New York.

You Can Have One of These Three Autos Without Spending a Cent for It



Not one cent of your money will rewards, too.

you have to invest, for it will cost you given away thousands of dollars' absolutely nothing to win the \$635.00 worth of grand prizes in the past 1917 Model, Five-Passenger Overland few months, this is the biggest, most Touring Car, or one of the two 1917 liberal Grand Prize Distribution ever Model Ford Five-Passenger cars, or announced. Get your share of the one of the other big Grand Prizes. big rewards—don't wait, but sign We are going to give away money and mail the coupon now.

Get the Facts

Maybe you think you know what it is all about by seeing the name of the great farm paper that is backing this plan, signed to this advertisement. But you can't guess, you have no idea-no, sireel Unless you sign and mail the coupon now, you'll never know, you'll still be in the dark about the nature of this A L L - C A N - W I N Grand Prize Distribu-tion. Write at once and get all the facts.

The old, young, men, women, boys or girls, all have the same equal, fair chance. You, all of our friends, subscribers and readers, are eligible to get your share of this Grand Prize Distribution. This is the chance, the opportunity, you have been waiting for. Take advantage of it—"get your name in the pot" and win one of the grand prizes in the wonderful, all-can-win Prize Distribution, which is just starting. The quicker you mail the coupon the better start you will have.

1917 Model Ford Touring Car



List of **Grand Prizes**

1st Grand Prize—\$635.00 Overland Five-Passenger Touring Car, 1917 Model, 31½ horse-power, electric starting and lighting.
2d Grand Prize—Ford Five-Passenger Touring Car, latest 1917 Model, fully equipped.
3d Grand Prize—Ford Five-Passenger Touring Car, latest 1917 Model, fully equipped.
4th Grand Prize—\$75.00 Victrola.
5th Grand Prize—\$50.00 Diamond Ring, for either lady or gentleman.

tleman.

6th Grand Prize—\$50.00 Fur Coat, for either lady or gentleman.

7th Grand Prize—\$25.00 Gold Watch, for either lady or gentleman, Elgin or Waltham make.

8th Grand Prize—\$25.00 Gold Watch, Elgin or Waltham make.

9th Grand Prize—\$25.00 Gold Watch, Elgin or Waltham make.

10th Grand Prize—\$25.00 Gold Watch, Elgin or Waltham make.

The Prize Distribution ends January

The Prize Distribution ends January 15, 1917. In case of a tie for any prize a prize identical with that tied for will be given to tying contestants.

Farm and Fireside's Guarantee

We wish to guarantee to the readers and friends of Farm and Fireside that this Grand Prize Distribution will be conducted with the utmost fairness in every way and that the prizes will be awarded just as represented. FARM AND FIRESIDE.

1917 Model Ford Touring Car



Now Don't Delay

If you didn't want one of these three automobiles or one of the other Grand Prizes, you wouldn't have read this far, would you? Certainly, you want one of these ten big Grand Prizes! Can you think of a quicker, surer way to get it than to sign and mail Here's your chance—
a great, big chance—
to get one of these ten
gifts without one cent
of cost—and big money too.

There is nothing disagreeable about the work-nothing that you wouldn't ask a friend to do, nothing to invest in and nothing to be ashamed of. Just a little visiting around among your friends and neighbors is all you need to do. After you have signed and mailed the coupon and have heard from us, you will be amazed, startled at how easily you can obtain such valuable gifts for so little effort on your part. You will agree with us when we say it is the most wonder-fully liberal Prize Distribution ever announced.

Everyone is Rewarded—Nobody Disappointed

There is no chance for you to lose. With the help and information we give you there's no chance of your not winning. Listen to this—winning one of these Grand Prizes is child's play, pleasant pastime. You don't need a hit of experience—the less you have the better. Don't think you haven't a chance to win and don't let anyone tell you we don't give away valuable prizes—you know we do. This great Prize Distribution is going to be conducted with absolute fairness and honesty to all.

Turn Spare Time Into Cash and Big Prizes

Votes

Auto Contest Manager Farm and Fireside This Coupon Springfield, Ohio Gives You Dear Sir:—Please send me, by return mail, full Information about your Grand Prize Distribution and credit me with 5,000 Free Votes. This puts me under no obligations. 5,000 Free

Box No.

Name

Post Office

R. F. D.

Remember this, before you read further, it will not be necessary to spend any of your time that you devote to other things—your spare time only is required. Could you make better use of your spare ments than to turn them into winning one of the three automobiles or one of the other big Grand Prizes? That's mighty big pay for a few odd moments occasionally spent in visiting your friends, neighbors and relatives. Did you ever hear of a more remarkable offer? Why, it's going to be difficult for you to keep from winning! Of course, you will want to act quickly so no body else in your neighborhood will get ahead of you.

Opportunities like this one—that is, real opportunities—don't come often. Possibly an equally good one will never be offered you again. So, the wise thing to do is to grasp this one before it is too late. If you have doubts, just sign and mail ithe coupon now and watch these doubts rapidly fade in realizations. It can't he denied—the chance of all chances, a once-in-a-lifetime opportunity is here. Isn't it the thing you have dreamed of to own an automobile all your own?

T.R. Long

Auto Con-

Mail Coupon Quickly

Don't you dare put it off another minntel Dig for your pencil—fill out the conpon—clip and mail it in to us now—to-day. Just for doing that you will get 5,000 Free Votes. The nice part about it is that 5,000 Votes may be all you need at the final wind-np to win big—Blg—mind you, for we are going to give away three automobiles and seven other Grand Prizes on such a liberal all-can-win pian that you will quickly see it is more like piay than work. Before yon turn this page—sign and mail the coupon quickly and start off with leaps and bounds, with 5,000 Free Votes to your credit. The coupon properly filled out gives you a flying, winning start. Send it to-day—sign and mail it at once.

T. R. LONG, Auto Contest Manager Farm and Fireside Dept. A Springfield, Ohio

Gold for Ideas!

Let's Have Yours-\$1,000 for the Best

ARE you playing the Farm Implements Game? It's something for men, women, and young folks. All are invited to take part without charge. Fifty pictures, each drawn to represent some farm implement or machine part or mechanical term, and all without titles, will appear in our columns. We want you to submit suggestions for titles to the pictures and will divide \$3,500 among 400 participants who submit the best sets of title suggestions. We have printed a Circular of Complete Information which contains the rules, list of awards, and instructions. This will be sent free. Send your name for a copy

Has it occurred to you that the \$1,000 which we are offering for the best set of title suggestions to fifty pictures representing farm implements should be yours?.

You live on a farm, don't you? You have on your farm many implements. You see them, use them, handle them, talk about them, or hear them discussed every day of your life. Supplementing your own practical knowledge and daily contact is the Official Key Book we have had printed. In this Official Key Book you will find an alphabetically arranged list of about 3,000 items and

Thus there is no reason why you shouldn't be able to submit a splendid set of title suggestions. With the pictures and a copy of the Official Key Book before you, submitting a set of title suggestions which the judges will declare the best, and accordingly award you the \$1,000, is merely a matter of observation and application.

Pictures Nos. 11 to 15 appear opposite. Two installments have already appeared, Nos. 1 to 5 appeared in our September 16th issue; the second installment, Nos. 6 to 10, in our October 7th issue. If you have these two editions of FARM AND FIRESIDE, clip the pictures from them and with Nos. 11 to 15 opposite you will have all which have ap-

If you are just starting to play the Farm Implements Game, our offer to send pictures Nos. 1 to 10 free, with free copy of Official Key Book, to all sending in the special offer coupon below will interest you. With back pictures and Official Key Book we will also send the Circular of Complete Information. So you will have all materials and instructions and will, in addition, receive a full three-years subscription credit to FARM AND FIRESIDE.

As-we explained in our initial announcement and again in our second Farm Implements Game Story, it is not a requirement that you subscribe or purchase the Official Key Book. But as following the announce-ments in FARM AND FIRESIDE and referring to the Official List in which the titles to the fifty pictures must be found are two obviously helpful items, it is natural to suppose that you will want to subscribe to FARM AND FIRESIDE and have your own personal Key Book, hence our special offer outlined in the coupon below.

All you need to do, then, to get (a) a three-years subscription to FARM AND FIRESIDE, (b) a copy of your Official Key Book free, (c) a copy of the Circular of Complete In-formation, (d) all pictures which have ap-peared in previous issues, is to send in the coupon below with \$1.00.

The subscription can be yours (new or renewal) or that of a friend (new or re-

Although no sets of title suggestions are to be submitted until the 50th picture has appeared (in our January 20, 1917, issue), and until February 20th will be allowed for filing sets, you should waste no time in getting started. If you neglect to sow as soon as planting season is on, you can't expect to reap a crop when harvest time rolls around. So send the coupon in man if you want all So send the coupon in *now* if you want all materials and instructions, and you certainly want them if you want a share of the



No. 11-What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No. 12—What Farm Implement, Machine Part or Mee ical Term Does This Picture Represent?



No. 13—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



No.14-What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



This coupon sent to us with \$1.00 will give you (or a friend) a three-years subscription credit to FARM AND FIRESIDE and bring you a free copy of the Official Key Book, all back pictures and Circular of Complete Information. Send it in now and share in the distribution of \$3,500 later.

Special Subscription—Free Key Book Offer Coupon

Farm Implements Game Editor, Farm and Fireside Springfield, Ohio

I desire to play your Farm Implements Puzzle Game. Enclosed herewith please find one dollar (\$1.00). Please extend my subscription to FARM AND FIRESIDE for three years from present expiration date. (If you are a new reader, subscription will he started with first issue sent you.) Also send me, free and postpaid, one copy of the OFFICIAL KEY BOOK containing a list of farm implements, parts and mechanical terms to he recognized and used in supplying titles to the fifty pictures, together with other data and information regarding the Game. I am also to receive pictures which have appeared in preceding issues.

Name	
R. F. D	
P. 0	.State



Celery-Blanching Hints

By C. H. Chesley

ATE celery can be more economically blanched with earth where land values are not too high. Not only does it protect the celery better from low temperatures, thus allowing it to be left outside even after considerable frost, but it imparts a better flavor to the

blanched product.

For celery to be marketed about Thanksgiving I prefer the following method: The celery is banked about the middle of October, the dirt being drawn well up to the tops of the plants. As the weather becomes cold, straw is put on top, and in this way it may be left right where it grew until time to

When it is necessary to do a lot of blanching I first tie the plants into compact bunches with paper twine, this being used because it will quickly go to pieces when thoroughly moistened. Starting with the first plant in the row, tie it up and pass the twine to the next plant without cutting, and simply wind it around, doing this to the end of the

To facilitate the work of tying, the To facilitate the work of tying, the twine is carried in a bag which is fastened to the right shoulder, and the end is passed through a hole in the lower end of the bag. The leaves are gathered up with the left hand and held in place while the right hand passes the twine around the plant.

After the tying is accomplished, a plow is run on each side of the row. A little work with the spade and hoe is also necessary in order to get the dirt high enough to bleach the celery plants properly.

properly.

The smaller varieties will not require much of the hand work, while the larger varieties will need considerable. Three weeks will usually blanch celery suffi-ciently for the market.

Marketing with Eyes Shut

By R. B. Rushing

ONE day last winter when away from home, I was waiting to take the return train. I noticed a car sidetracked near-by, with four or five wag-ons beside it and a group of men standing there. The men had hauled and filled a car with sweet potatoes for shipment to market. I asked what market they were shipping to, and they said they had not yet decided. They named six or seven points they were consider-

One named a certain market which he thought good, and another man said, "My potatoes will not go there, for I was skinned out of the last shipment I sent to that dealer." I listened to their conversation some minutes, and finally asked what they could get for them at different points mentioned. Not one of them knew what potatoes were worth at proper culture, his ea those points. They had no knowledge of for market in August.

prices, but just thought they would "try a shipment anyway." These men did not know their potatoes would bring enough to pay freight.

I asked if they did not have store room enough to hold their potatoes until

they knew what they were doing. They all said they had good houses and could have kept them longer, but they just thought they would ship out some and

try it.

"Try it." There is the keynote to so many unsatisfactory return checks from shipping all kinds of perishable produce, the summer season, especially during the summer season, when everything is constantly going into the markets from all quarters

These shippers had worked hard all summer to raise good potatoes, and were sending them off at a guess ven-

I raise sweet potatoes myself, as well as most other perishable stuff, and I know sweets will sometimes not sell at It is no wonder to me that men handling other produce as described are complaining of not making any money. These men lack one big essential of farming success—marketing ability. I asked the success asked this was a fair example of these men's marketing practice. He said: "Yes. They seldom get much for their produce. Sometimes a little profit, but often scarcely enough to pay expenses."

No commission house, even if honestly conducted, can get good prices for produce when the market is glutted.

Sawdust Mulch

By A. W. Galligher

LAST year, before hard freezing set in, we put old rotted sawdust around the raspberry plants to a depth of six to ten inches.

Very few of the young plants were winter-killed, where the sawdust was used. One corner of the patch was left unmulched. Both old and young plants suffered both from cold and drought. We grow the Cuthbert Red.

The dry weather, which began just before the berries started to ripen, did no damage to any except those left un-mulched. They literally dried up on the

Little vs. Big Farms

By Jessie B. Dixon

THE experience of Mr. Samuel Beech, I changing from extensive to intensive farming, just over the border line in Canada, carries a lesson that it will profit some general farmers to learn. Mr. Beech had been operating a large farm, distant from markets, on general lines for a number of years with quite different success. When paying a visit to relatives within driving distance of a large city market, Mr. Beech got the "trucking fever" and arranged to dispose of his large farm and purchased six acres adapted to truck-growing. His new truck farm is well supplied with water for operating his overhead irrigating system.

From his special crops, like lettuce, tomatoes, peppers, and celery, delivered direct to the city markets, Mr. Beech finds his income and profits much more satisfactory than from his former large general farming operations. His plants are started in greenhouses and hotbeds, and are transplanted once before setting in open ground. His celery crop usually comprises about one acre, and by means of artificial watering and proper culture, his early crop is ready



The experience of Mr. Beech is just one more confirmation that many a farmer will succeed with a few acres where he barely makes both ends meet with many



BENNETT BARGAINS Save You 15 to 50%

Remember, when you buy of Bennett you are not only buying in the largest lumber market of the world—but you are also getting new, selected first class building ma-terials. We do not deal in wreckage, seconds or job lots.

Being first hands and dealers in enormous quantities, we can well afford to sell by mail at a very small margin of profit. Now is the time to order Bennett materials for fall use. Our stock is the largest—our service prompt and our goods guaranteed to give satisfaction.

	The second secon
Mouldings—Lar ber mart, Quality	gest stock in the heart of the lum- y and prices unequalled.
Base Mold—Size 100 lineal ft.	e % x 1% in. per Yellow Plue\$.90 Oak\$1.80
Carpet Strip-S	Izo W v W In nor
	Yellow Pine\$ 40 Oak\$ 85
Window and Do	or Telm
Style "A" casing-	Size 13-16 x 3¼ in. per Yellow Pine\$1.75 Oak\$2.85
Backband-Size	14/ v 14/ in ner
	Yellow Pine\$1.25 Oak\$1.75
Stool-Size 1% x	3% in per
	Yellow Pine
C 2 40m	samplete estales also-

Send for complete catalog show-ing whole line, well illustrated.

MINO SEND US THE COUPON TODAY - MINISTER MINISTE

Our doors are guaranteed as to quality, finish—and against warping. Complete line in Oak, and against warping. Co Birch, Fir or Yellow Pine.

No. 205—A handsome yellow pine 5-cross door, 13% inches thick. 2-0 x 6-0. Bargain—\$1.80. Other sizes and styles at equally low prices.

Quality is especially important in a window—it must be really good or it will spoil the whole house. Our windows are guaranteed to be right in both quality and price.

No. 126—A fine four-light window ready glazed—upper and lower sash—size 2 x 3 ft. 10 in.

ONLY \$1.05

You need the big Bennett Price Regulator Catalog

Full of wonderful values and clearly illustrating everything necessary to build a frame structure from cellar to roof—including all kinds and grades of hardware.

Ray H. Bennett Lumber Co., Inc.,
Bennett Wharves, North Tonawanda, N. Y.
Send me at once your FREE Price Regulator
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FUR NEWS, published monthly, tells all about raw furs, trapping, hunting, fishing, fur farming, hunting dogs, woodcraft, guns, roots and herbs, market prices. Lots of good stories; tine illustrations. Send 10c coin copy and get FREE valuable illustrated Trapper's Guide. FUR NEWS, 71 West 23d St., New York.

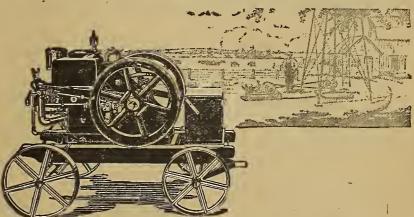
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Make more on your furs by sending them to us. Our prices are famous amongst hunters and trappers all over the country. We were the first to get out a classified price list that lets you know exactly what to expect for your furs. We make no deductions from published prices on any pretext of commission, transportation, etc. Liberal grading. Prompt returns, Will submit offer and keep furs separately when requested. Write today and get on our mailing list. Then you will be kept informed of the market so no one can take advantage of you. We are in manufacturing centers and have old established outlets. Our foreign connections are still active.

Becker Bros. & Co. Dept. G6, 416 N. Dearborn St., Chicago

The Titan Engine Pays Its Way



F the million internal combustion engines in use on American farms nearly one-fourth are Titan engines. To date we have sold over 250,000 of them, mostly to farmers. An engine must give satisfaction in every respect, and be well worth the

price asked for it, to reach any such standing as that.

The whole record of Titan engines is one of long, efficient, economical service—12, 11, 10, 9 years' service are commonly reported—the engines still running. Five dollars for repair bills in 12 years; 15 cents spent for repairs (new packing) in 7 years. These statements from farmers are typical of the efficiency and economy of Titan engines. Titan engines.

The slightly higher price you pay for a Titan engine is cheap insurance against engine troubles and delays. When after years of experience with Titan engines, farmers continue to buy them, it makes us feel that we cannot press the claims of Titan engines upon you too strongly. The Titan is there when you need it, not once in a while, or for a short time, but always, and for so many years that the cost per year of service is just about

International Harvester Company of America (Incorporated)



CHICAGO

Champion Deering McCormick Milwaukee

USA Osborne Plano



\$190 One Week

That is what one young man, C. J. Glover of Illinois, made during the last week in September.

He made it by acting as special representative of FARM AND FIRE-SIDE, attending to the work outlined in our special agents' plan. Yet he is only one of a number who have earned big money. One hundred and three others made more than \$200 each last month. Nine of those made more than \$350 each.

We have openings in our organization for a few more men-men who are not looking for a soft snap-but men who are willing to exchange real energy for real money. If you are such a man and will put your heart into anything you undertake, then we can put you in touch with a real opportunity.

Earn \$50 to \$75 Weekly

You can average \$50 to \$75 regularly each week, net. You can have work that is delightful and healthful. You can boss yourself. You can make your working conditions ideal if you are willing to give the best of yourself to our work.

Backbone vs. Wishbone

The men we want are those who want money bad enough to work for it-not wish for it. We want men with "come-back" enough to stand an occasional disappointment-men with "stick-on-the-job" enough to keep working when the wave of things comes their way.

If you are such a man, we want you-and you want us. We offer you the opportunity you have been waiting for. We offer you a chance to really GET SOMEWHERE-not in the distant future—but NOW.

Cut Off on This Line

Coupon

FARM AND FIRESIDE Agents' Division

Springfield, Ohio

					particular	s of
your	spe	cial	agen	ts' I	olan.	

St. or R. F. D.



Motor Highway Stations

By Carlton Fisher

A CAMPAIGN has been launched to provide stations along the national highways for the service and convenience of automobile travelers. In many respects they will be patterned after railroad stations. The Public Comfort Station Bureau of New York City has suggested the plan, and already has the support of the American Automobile Association and prominent national highways associations.

Besides affording a place where trav-

Besides affording a place where travelers may rest and refresh themselves, there will be telephones, hospital facilities, repair service, and possibly amusements. Cities along the principal national highways are expected to furnish the funds to build the stations, and are to be reimbursed out of the receipts from pay privileges charged the tourists.

Drives Car at Ninety-Three

TEARNING to drive an automobile at _ninety-three years of age doubtless entitles Robert Doak of Pennsylvania to the distinction of being the oldest new driver this year. Mr. Doak was born before the days of steam traffic, and has witnessed all the developments in rapid transportation.

He is a proficient driver, and his machine is a touring car of over 30 horse-

Mr. Doak wishes to disprove the proverb, "You can't teach an old dog new tricks," and also decided to get all the pleasure possible out of life. When the pleasure possible out of life. When middle-aged he never dreamed of such a thing as an automobile, much less owning one.

Tires for Trailers

By Leo Howard

WHICH are the best tires for automobile trailers, hard rubber or pneumatic? Usually a pneumatic tire is advisable for a vehicle that travels at a speed of 20 miles an hour or more.

As a trailer is not self-propelling and, furthermore, as the road is somewhat smoothed down for it by the automobile, the wear on trailer tires is very slight. Punctures are infrequent and, altogether, pneumatic tires give excellent service as well as making the load ride with little jolting. For speeds of less than 20 miles an hour, either pneumatic. than 20 miles an hour, either pneumatic, hard rubber, or cushion tires may be

Long Trips by Motor By W. V. Relma

MOST everyone takes long trips in his car nowadays, but few go adequately prepared. They may get home safely a dozen times, but there will come a time when they will appreciate the equipment I am about to describe.

is of course essential to have parts for those that may go wrong—spark plugs certainly. I like to have plenty of good plugs. Under ordinary circumstances an extra plug installed now and then will take care of any emergency that is likely to arise.

Frequently the extraordinary occasion bobs up. For example, one evening upon a short trip, I allowed my car to stand out for several hours in a heavy downpour of rain. When I tried to start
I found that water

had leaked in through the joints of the engine hood and sur-rounded the plugs with water as well as wetting the wires. In that condition it was impossible to produce an explosion. By wiping the wires thoroughly dry and in-stalling a fresh set of plugs, the motor started at once. In

Emergency tire chain

this way only a few moments' delay was experienced, otherwise the delay might have extended over several hours. Extra wires and points for the magneto, or such parts of the ignition system as are likely to give trouble, should be carried.

Canvas buckets, canvas basins, and similar articles that take up little room are necessary on long trips. Equipping all the doors of the car and the back of the front seat with pockets will be a great convenience. Many necessities can be carried buttoned in these pockets. Road maps, time tables, soap, paper towels, napkins, tire tools, tire gauge, flashlight, mirrors, paper drinking cups, extra handkerchiefs are all handy things to carry in these pockets. Such door pockets are sold by accessory houses and seat-cover manufacturers, and are ready-made to fit nearly all cars at a price of about a dollar a pocket similar articles that take up little room at a price of about a dollar a pocket

good tow line is worth its weight in gold when needed. A number of different "pull-outs" are advertised, and are easy'to carry. One patented type will enable one person to pull an ordinary car out of a bad mudhole or ditch by means of a lever attachment. Care should be used in attaching such devices so that no particular strain is put upon the rear axle or car springs.

Keep Baggage Well Covered

The clothing question will have to be considered according to the length of the trip. The advice to travel light is of course to be followed, but not too light. If you desire to stop at good city hotels it will be necessary to carry clothes in a trunk for such use. The trunk must be prepared to withstand all kinds of weather. It must have a cover to keep the dust out, otherwise the "nice" clothes will not be very presentable when wanted.

Use good tires. It is the height of

use good tires. It is the height of folly to start on a long trip with bad tires. Only the most annoying type of trouble can possibly follow unless you were born lucky. In addition to starting with good tires, have good extra tires and plenty of tire accessories, such as tubes, blow-out patches, tube patches, soapstone sandpaper cement and tread soapstone, sandpaper, cement, and tread

In thickly populated portions of the country tire shops are of easy access and the service is reasonable, but where the population is sparse it may be a long time between points of help and a short time between punctures.

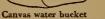
Important Things to Carry

Furthermore, roadside tire repairs are usually not very permanent and may be viewed in the light of makeshifts. I pumped up a tire twelve times and removed it nine times one hot July afternoon during a trip of 25 miles. The memory of that day still lingers warm and melting.

On very long trips special equipment should be carried, as camp stools, sleeping tents, folding tables, water bags, canned goods, condensed milk, butter, canned beef, bouillon, peanut butter, olives, pickles,

and possibly a small oil stove, which can be bought at most supply houses.

A "first aid"
box should be carried equipped



with standard remedies. All families have

A good fire extinguisher and a hand ax may be included. Repair parts for the car should be considered by the distance to be traveled, and the car itself.

Serious Trouble is Infrequent

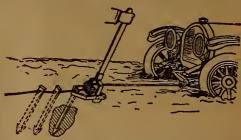
Extra gears and that sort of parts are not essential unless the driver knows his car has a weak gear or is prone to develop gear trouble. Some cars have a tendency to burn out connecting rods easily. If yours has such a failing, two or three extra rods will prove profitable. Radiator cement for unlooked-for radiator leaks, a fan belt, grease cups, bolts and nuts of all sizes, a spring repair device, plenty of wire, cotter pins, and a good trouble light are mechanical aids that are frequently useful. useful.

Serious break-downs are so seldom encountered that it is not necessary to every sort of trouble possible to occur. Usually it will be found that the most essential and possibly a very insignificant part has been left behind when a very serious break-down occurs.

All standard cars have accuring try to load up mechanical parts for

All standard cars have service sta-

tions where a complete stock of parts is carried, so that serious trouble can be quickly remedied. Some times a near-by farmer or resident can be induced to take the necessary part off of his car



This style of "pull-out" enables one person to get a heavy car out of a ditch

and help the traveler on his way, getting the new part later himself.

Driving in Tight Places By A. W. Rogers

THE usual problems of automobile-driving cause a fair amount of anxiety, but every now and then a really "tight place" is encountered. As these tight places are the ones that cause trouble and sometimes serious accidents, it is well to consider what one should do when an emergency arises

If a very long steep hill is encountered, I believe that to change to "low" and be prepared with both brakes is sufficient to warrant a safe descent. In sufficient to warrant a safe descent. In the winter or during wet weather it will be found absolutely necessary to use chains or some non-skid device upon the rear wheels. If necessary, the ignition can be turned off and the car allowed to descend against the compression of the motor. In other words, the effort of the car in turning the motor over while go-ing down hill will act as a partial brake.

To Pull Out of Mud

When stuck in the mud it is usually useless to race the motor and spin the rear wheel. The whirling wheels only cause the car to dig a deeper trench. I ruined a tire that way once that had a good many miles of hard running in it. A few minutes of such spinning will frequently cause greater wear upon the tire tread than many miles of usual travel, and will frequently loosen sections of the tread.

One time when such an emergency arose, all I had in the car which could be used to prevent skidding was an old pair of trousers. They were pressed into service by being torn apart and each leg tied securely around the rear wheel. This enabled me to pull out of a borgy winter road very posity

wheel. This enabled me to pull out of a boggy winter road very easily.

As I was coming down an icy hill last winter, a railroad train was about to cut off my opportunity to pass. I did not have chains on it, so I had a choice of two things to do: either to speed up and cross the tracks before the train arrived (it was traveling rather slowly), or to steer the car into the near-by curb. In this instance I raced the car across the tracks, but under most circumstances it would have been safer to have taken the curb. Of course the brakes would not have held on the icy hill, and would simply have caused the car to skid, possibly right into the train.

families have such remedies for common ailments, and individual ideas will dictate what should be carried. Remembering, of course, that fingers get bruised, toes mashed, snakes and mosquitos bite, bees sting, wire fences tear, wood furnishes splinters, dust collects in eyes, and sun and wind tan and freckle.

A good fire extinguisher and a hand ax may be included.

kind happened.

The new driver forgot the brakes and simply slowed down the motor, allowing the car gradually to come diagonally across the road. My friend tried to pass on the wrong side and lost a couple of fenders and other running board equipment in the attempt. He could not receive the demagns because he was not recover the damages because he was on the wrong side of the road at the time the clash occurred. If the same damage had been inflicted during an attempt to pass on the right side, the new driver would, of course, have been

Here is an instance that might have developed into a tight place, and yet did not cause any trouble. A man of my acquaintance had an old car which he had converted into a truck by removing the rear touring-car seat, and building quite a long bed over the rear wheels. His ordinary loads were light but bulky, and he had no trouble with it. One day he undertook to carry a dead hog. When he came to a hill the load shifted and the front end of his car was raised a couple of inches from the ground. Under these particular circumstances this caused no dangerous trouble, under other circumstances, however, it might, have caused the car to upset.

Slow-Speed Joy-Riding By Henry Reiser

I HAVE been asked, "Because of what one thing that the automobile does for you; does it stand out in your mind and activities as of distinct value to you?"

I answer that while my first automobile purchase was inspired by the desire to save the life and health of everyone near to me, still that having been successfully accomplished, my sole purpose in keeping a car was to secure rational in keeping a car was to secure rational pleasure. And that is the one thing that the automobile does for me that stands out in my mind and activities as of distinct value to me-it gives me rational pleasure.

Now, it is one thing to be an automobilist, to keep a car, spend money on it, bilist, to keep a car, spend money on it, scorch up the roads, scare humankind and chickens out of their wits, make enemies of farmers and others, figure frequently in accidents, and be a nuisance generally. It is quite another thing to get rational pleasure out of the use of a car. My personal practice is to keep in mind always the safety of my own passengers, and to give equal consideration to the safety of others who may be using the highway at the same time.

Makes Passengers Feel Safe

As for speed, my usual pace is from 15 to 20 miles an hour. Mere buggy speed is too slow for an automobile—it becomes "draggy," and one wishes to "get out and push." Fifteen to twenty miles is more interesting, besides being reasonable. We do not deviate materially from this speed in ordinary riding, but sometimes in midsummer, seeing a violent storm coming up, I run 25 or 30 miles an hour if the comparative absence of traffic warrants it. I have even made 35 miles as a record in flying made 35 miles as a record in flying ahead of a storm, and this with a car easily capable of 60 miles. Otherwise I practically never exceed 20 miles. At that speed we can see everything; everyone will enjoy a feeling of safety and confidence; all, except mere speed lovers, will extract real pleasure from the riding; the wear and tear on the car the riding; the wear and tear on the car will be vastly reduced, consequently the upkeep cost will be less, and the life of the car appreciably lengthened.

Besides running at reasonable speed, I endeavor in various ways to add to the enjoyment of those who may ride with me; and to foster that feeling of confidence, for instance, on arriving at a railroad crossing I invariably come to a full stop and, having looked both ways and made sure there is no train approaching, I leisurely cross over. My passengers feel safe, and in fact they

Then with "thank-you-ma'ams" or other inequalities of the road surface I slow down and glide over as smoothly as possible, giving little or no jar to my friends. On approaching a crossroad I always sound my horn, and slow down so that if someone should come flying along the other road at right angles to the path of my car I have a chance to avoid a collision which might be inevita-ble if both were traveling at a high rate of speed.

Daylight Driving Preferred

In the general handling of the car In the general handling of the car there are many little things the careful, competent, experienced motorist can do to add to the pleasure of the trip for his passengers. Having ample reserve power, instead of going at a hill like a cannon shot I approach it with no increase of speed, begin and finish the climb in a leisurely manner, often leaving my passengers under the impression ing my passengers under the impression that they have been riding on the level all the time.

In coasting the same moderation is exercised, the car being always under absolute control and capable of being entirely stopped in short order.

Besides driving carefully, I endeavor

to have the entire car in superb condition, so that nothing may happen on a tion, so that nothing may happen on a trip to detain us for roadside repairs and mar our pleasure, and I do not drive at night when possible to avoid it. As a rule, the only driving I do after dark is in returning from a trip of unusual length and miscalculating the time required to reach home.

So our riding being practically all by daylight and with due care for safety, we see everything and enjoy every minute we are out; we get the fresh air and

ute we are out; we get the fresh air and sunshine, and by frequently searching out roads we have not yet traveled there is always a newness to the scenery and surroundings which prevents monotony from spoiling one's enjoyment.

Followed rationally, as we follow it, automobiling is a most delightful pastime, perfectly safe, conducive to health and contentment, not inordinately ex-pensive, and should make a vast difference in many homes where now in leisure hours folks idle about the house and don't know what to do with them-

Hudson Now Holds World's Greatest Hill-Climbing Record

Makes Fastest Time Up Pike's Peak

No hill-climb or mountain test in the world equals that imposed on motor cars that race to the summit of Pike's Peak. A Hudson Super-Six Special made the best time of more than 20 contestants to the top of America's most famous mountain, over the longest, steepest, highest travelable road in the world.

The start, at a mile and three-quarters above the sea, is higher by far than is the altitude of the finishing line in most hillclimbs.

The finishing point of Pike's Peak is almost two and three-quarters miles above sea level. In the twelve and a fraction miles of the course there are 60 turns, and the rise is almost one mile high. There is no place where the car is not climbing.

The high altitude affects the power efficiency of the motor and water boils at such low temperature that motors cannot be cooled as they are in lower levels.

Hudson Fastest Time

The Hudson climbed up this winding steep road to the "Top of the World" in 18 minutes, 24 seconds. Its time was 2½ minutes faster than the next fastest

This feat now gives to Hudson practically every worth-while record. In speed—when 102.3 miles an hour was attained at Daytona; in endurancewhen 1819 miles were covered in 24 hours, with a stock Super-Six chassis we established marks not likely soon to be equalled.

Now we have added to these the greatest of all hill-climbing feats. In it we have shown the endurance of the Super-Six.

· Others Failed

A INTERNATION DE LA CONTRACTION DE LA C

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Motors of some of the most famous racing cars in the world were unable to withstand the strain of that climb and so did not get to the summit.

It is constant hard pulling all the way and more than three-quarters of the distance must be made in second speed, even with specially geared cars.

In addition to mere climbing, as is required in all hill-climbs, here is added the difficulties of carburetion and cooling.

The altitude that affects one's breathing so much that even the strongest man can stand only the least amount of physical exertion, has a similar effect in reducing the power of the motor.

We made that record in a contest in which were entered, as described by a Denver newspaper, "Fours—Sixes—Eights—Twelves and Super-Sixes."

And, as in all tests in which they have been entered, the best performance was shown by the Super-Six.

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Plan Chick Greens Now

By Alice Margaret Ashton

JP TO the time when our chicks can be put on free range we have been troubled about sufficient and satisfactroubled about sufficient and satisfactory green feed for several hundred chicks confined to a brooder house and a limited yard run. Oats sprouted in the usual way were not greatly relished by the small chicks, and proved wasteful, as the chicks ate only the tops at best. Grass clippings and cut clover were not always obtainable.

Now we have discovered a way that has proved so satisfactory that we use

has proved so satisfactory that we use no other. In the fall, if our chicks are expected before the soil will have dried out in the spring, we put plenty of good soil under cover.

A few days before the chicks are due we fill several flats similar to those we use for sprouting oats with the soil, and sow in it oats that have been soaked overnight in blood-warm water. The oats are sowed thickly and are given only a light covering of soil.

When the first tender shoots show

above the earth we set a flat of them in the brooder house for the young chicks.

This proves so much better than giving them a square of sprouted oats, for these oats in the soil stay fresh until consumed, and the chicks love to dig

and pick at the dirt.

When the sprouts have been eaten off, the flat is removed, sprinkled, covered again with a burlap, and left until

more sprouts appear.

In this way the flats can be used over and over with no more attention than sprinkling daily. As the chicks get older they eat more of the buried grain until the flats need to be emptied and fresh grain planted.

Since the new sprouts appear in the course of a few days, not many flats are needed to keep a couple of hundred young chicks supplied.



A yearling Barred Rock hen, well marked and a fair representation of the breed

What to Do with Roosters

By Vincent Lee

SELL them, of course. That is what nine out of ten would say if asked, "What are you going to do with your broilers?" And yet, that only half an-swers the question. But how are you going about getting your chickens to the people who are hungry for them?

A few weeks before our birds are big enough for marketing I take a trip to the leading hotels of the city nearest to us and make an agreement with the boss steward to take so many a week till they are all worked off. I make it a point of seeing the man of the white apron myself. I tell him what I have. I find out about what weight he likes best. The matter of the price is settled upon and a record made of it. Before now I have had trouble where no memorandum of the bargain was kept at the time the sale was made. One man caused me considerable loss. He may have forgotten what he agreed to do, for he was a busy man. Just a minute with a pencil would have kept us both from some bitter feelings and some hard words. Put it down in black and white. The book remembers. I may not. You

may forget.

If I fail to make a market near home

for my broilers and roasters, I have a man farther away in a large city who is always ready to take every bit of surplus stock, either of eggs, broilers, or older poultry, which pays me a fair profit. I believe we all ought to establish some such metropolitan connection. It would save us a good deal of money It would save us a good deal of money in the course of the year. A few weeks of feeding broilers after they are big enough to market takes a good share of the profit out of the season's business. I have found that when they are being the season's business. have found that when they weigh about a pound and a half they return a higher profit than at any time later, unless you have a specially good market for roast-

BEFORE the pullets are housed for the winter, place a band on the right foot, and band the year-old hens on the left foot. This will help distinguish them later on. Hog rings will serve the purpose of bands.



A Barred Rock pullet of better than average marking and shape

A Help to Smother 'Em

WHEN wet weather comes and chickens can't get dust to roll in out of doors, it is important to have a supply of road dust or something that is equally good for the birds to dust themselves with during the late fall and winter months. Several barrels of road dust stored conveniently from which a dust, stored conveniently, from which a good dusting box three or four feet square can be kept filled will add greatly to the comfort of the chickens after bad weather comes, and will greatly reduce the louse trouble early next spring.

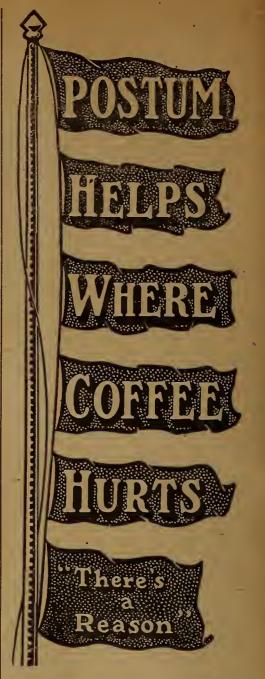
The dusting box should be elevated foot and a half or two feet from the floor, and be placed where the sun will shine into it part of the day.

If a handful of flowers of sulphur is mixed through the dust every two weeks, it will help to drive the vermin from the poultry.

ONE of the best ways to feed medicine to any kind of poultry is to get from your druggist some of the capsules that are used for giving bad-tasting medi-cines to human patients. These capsules can be easily filled with the medicine to be given to the bird, placed well back in the throat, and they will be swal-lowed easily. For giving fowls worm medicine these capsules are excellent. Thirty to forty-five grains of powdered areca nut for an adult bird and one-half as many grains for immature chicks, after withholding feed for twelve hours, testinal parasites of all kinds.



A yearling "pullet' bred" Barred Rock cock of excellent marking and approved show-type shape. This bird and the two females shown on this page represent the stock of C. N. Myers, a Pennsylvania Barred Rock breeder



FARM 115 acres. Beautifully located. Well improved. On traction line, Near College town. For quick sale \$14,000. Write owner for description and photos. Thomas Foster, Wooster, 0.









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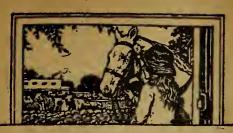


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Live Stock

Hereditary Defects By R. E. Rogers

SOME five years ago we had a pretty good specimen of a road mare that had been spoiled in her training by the first owner. We bought her without this knowledge, and found that she was a ripper indeed. Her list of smashed dashboards and broken shafts made the dollars get away pretty fast. We finally found that the real cause was not en-

tirely the breaking or training, but just an inherited "orneryness" that was in the family from away back.

But, unfortunately, before we had discovered that, we bred her to a coach atallian that was a real horse. The celt stallion that was a real horse. was one of the finest coach colts that I have ever seen. This filly grew up, and was bought by a horseman who knew her mother and what she had "smashed up" for us. He went at her in the best way he knew, but it was the same old story over again. She had to be tied to the shafts, and big ones at that, and would kick the end out of any vehicle that was behind her. As to these minor points it doesn't matter further, but the mare should never have been bred. She mare should never have been bred. She has started a mean breed of animals that somebody will have to deal with for years, and possibly someone may pay for it with a life. Yet it is too often done. We breed a mare or animal of any kind that we can't do anything else with. We say that's the only way to get our money out of her, and I supnose it is

else with. We say that's the only way to get our money out of her, and I suppose it is.

With cows it is almost the same. Though the results are not always so serious, it is bad enough. A cow seldom kills anyone, though she may do some crippling during her time.

I have been on dairy farms throughout the northern part of Ohio, and have seen these things being done over and over again. Especially is this true with advanced registry stock. A cow will make a big record but have an ill-shaped udder, short teats that are almost impossible for a fair-sized hand to grasp, yet the owner will continue to breed her because she gives the production. It takes two or three times as much time to milk her as for an ordinary cow—but she made a record, so we must have her calves.

Some herds have cows in them that are just plain ornery kickers. There is no way to stop them without tying a foot, and sometimes the whole cow must be tied to the side of the stall. Every milking time this must be done. With

be tied to the side of the stall. Every milking time this must be done. With a good milker this happens more than a thousand times a year. Is it worth it?

Curing Laminitis

AN ANXIOUS correspondent wants advice regarding a heavy work horse, eleven years old, seemingly perfectly sound and healthy until lately. Now he has occasional attacks of what appears to be laminitis.

Laminitis is an inflammation of the sensitive laminæ of the feet. These laminæ are very delicate structures, re-sembling the leaves of a book in their arrangement, and they assist in the attachment of the hoof to the underlying tissues. The inflammation of these delicate structures is consequently very

painful, as the horn of the hoof will not allow their expansion.

The best treatment consists in removthe shoes upon the appearance of the first symptoms of stiffness. This should be followed by the application of cold water to the inflamed feet, to reduce the inflammation and stimulate the duce the inflammation and stimulate the weakened and congested blood vessels. If possible, the horse should be placed in a tub of cold water, to remain there several hours daily; but if the animal cannot stand, the feet should be wrapped with wet swabs, which should be saturated with cold water every hour. Wet swabs should also be applied to the feet after removal from the tub. If noticed in the first stages it can often be avoided by placing the horse's feet in warm waby placing the horse's feet in warm wa-ter, which can be changed to cold after the first half or three quarters of an

The medical treatment is simple, and The medical treatment is simple, and consists in the administration of potassium nitrate. This drug gives very satisfactory results, and in mild cases should be given in one-half ounce doses three times daily, but in severe cases three-ounce doses should be given every six hours in the drinking water. These large doses can be continued for a week without injury, and a vast improvement is usualy noticed within that time. Laxative food should be given, and an occasional bran mash is recommended. The shoes can be replaced as soon as the animal's condition permits. These should not rest on the sole of the foot, as the weight of the body should be thrown on the wall of the hoof if possible. A shoe that is dished out or concaved on the surface next to the foot is the best, as it relieves the sole from all pressure.

Grazing National Forests

IN CONNECTION with the effort to introduce the best methods of handling all classes of live stock on the national forests, a study of the goat industry has been inaugurated by officials in charge who say that in parts of the Southwest large numbers of Angora goats are raised for their hair. In 1915 more than 50,000 of the animals were grazed on national forests in six States.

The goats raised in the West feed mostly on brushy undergrowth, which they are said to like even better than the succulent grass found in the same region. On this account the Forest Service officials say that in many places the goats are really desirable, as they thin out the dense brush and allow grass to get started.

Many people think that the foresters have been opposed to letting goats range on the national forests, but offi-cials say that this is not true. In some cials say that this is not true. In some places, particularly in hardwood regions, goats damage young forest growth. In many of the coniferous for-ests of the West, however, this damage is slight if the range is not overstocked and the animals are properly handled. Often, it is said, they are of real benefit in keeping down inflammable brush and thus aiding in protecting forests from

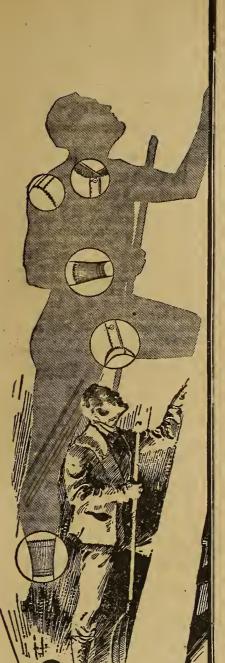
The goats are grazed in bands of 600 to 2,500, though the smaller herds are more common. Sheds are necessary during the kidding season, since the newly born kids are almost as helpless as babies, and must be protected from the cold and wet. After they get to be six or eight weeks old it is hard to kill them with a club, as one ranger put it.

When the kids are small they are not allowed to run with their mothers. Sometimes they are kept in a corral just high enough to prevent them from jumping out, but low enough to allow the nannies to jump in. Often each kid is tied out to a stake and the mother comes in during the day.

Unlike sheep, which can go long periods without water, the goats must have water frequently, and their range has to be planned with this in mind.



Hog cholera is again rampant, and hogs fed new corn appear to be most susceptible. Watch their appetites and get in touch with the nearest source of good serum



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Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or Blatchford Calf Meal Factory, Dept. 3 Waukegan, Ill.



Dairying

Profitable Heifer

By Virgil M. Slaughter

FIVE years ago I purchased an extra for \$20. She consumed \$10 worth of feed the first winter and, adding \$10 for

pasture, hay, and wheat bran until fresh, she was a total expense of \$40. I received \$8 for her calf at the butch-er's, and sold \$50 worth of butter also, using enough on the table more than to pay for feed. When she was fresh again I sold her for \$75. This made my gross sales amount to \$133, and my net profit was \$93.

Excellent Health Record

By B. D. Stockwell

THE tuberculin test is now generally admitted to be the safest and surest means of detecting tuberculosis in a dairy herd. Under ordinary conditions it is about 98 per cent effective in accuracy, and when the diseased animals are slaughtered or removed the future health of the herd is assured.

However, a sentiment has existed, though without foundation, that every

after cleaning them thoroughly and pounding them to remove the sawdust. He used the boxes for seats in his cabin. But after the boxes had become thoroughly dry a little sawdust was scattered when he moved them, and he threw the sawdust into a stove on which he was preparing a meal. Immediately the contents of the stove, including the lids and the meal, went to the ceiling, enveloping the old gentleman. The man is still alive, but does not care to try it

The owner of the cows I mentioned used a great deal of dynamite on county road work, and was not aware of the danger of allowing partly used and empty dynamite boxes to lie around within easy reach of the stock.

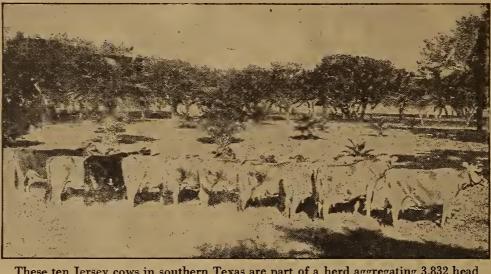
Vat for Liquid Manure By E. Quinn

MY EXPERIENCE with a vat for liquid manure has been so successful that a short account of it may benefit someone. I have 20 head of cattle in a barn 24x50 feet. The floor of the stable is concrete, and slopes to a gutter in the center of the barn, which drains liquids to a vat outside of the barn.

The vat is made of concrete and measures 36 inches in diameter by 60 inches deep. Of course you can put it anywhere you want, according to the convenience. If you do not care to make it of concrete an old rain barrel will do, or you can buy a length of large concrete tile. Place the tile upright in a hole dug in the ground, pour cement in the bottom to make it water-tight, and connect the drain with it. Then provide a cover so nothing can fall in, and you will be able to save the liquids as well and the ordinary manure.

as the ordinary manure.

We laid the concrete floor in the barn ourselves, using first six inches of cintime the test is applied, even in a herd ders, then two of gravel, all tamped that has been previously freed of disdown well. On top of this we laid the eased animals, a small percentage will concrete, mixed according to the direcders, then two of gravel, all tamped down well. On top of this we laid the



These ten Jersey cows in southern Texas are part of a herd aggregating 3,832 head found with one exception to be entirely free from tuberculosis

dairymen sometimes hesitate to have their herds tested, fearing what they assume will be an inevitable loss.

All such beliefs are groundless. The picture shows a group of Jerseys in southern Texas which are part of an enormous herd totaling 3,832 head. The tuberculin test was applied to the entire herd and all animals but one were found to be healthy. The one reaction was a grade bull that had been brought in from another part of the State.

This is a remarkable health record, showing that the largest herds may be freed from the disease, and kept free if care is taken to purchase none but tested stock.

Cows Eat Dynamite

By C. R. Smith

HAVE just witnessed the death of two nice young cows from eating dynamite. It seems to affect the spine, and after several hours they cannot stand on their feet. They also have spasms, and after lying down they kick out but will not attempt to get up.

If one attempts to get them up they will straighten their legs out so it is quite impossible to do anything with them. They have the appearance of being poisoned, but there is no bloat and no outward fever until near the last, and then there seems to be a great deal of heat along the spine. But they are very thirsty, and when opened after death the internal organs are greatly inflamed.

In the particular kind of dynamite that these cows ate the substance left in the stomach had the appearance of black sand. Manufacturers of dynamite should insert in their printed matter a paragraph warning users of dynamite to keep it out of the reach of cows. The packing sawdust is also dangerous, even

Some time ago I gave one of my neighbors some empty dynamite boxes

be found affected. For this reason tions of the manufacturer. As we had all the materials on the place except concrete, the cost was small, about \$35. The top of the floor and the gutter we made smooth so it flushes off easily.

Barn Wisdom

BARNS for Wisconsin Dairy Farms" is the title of a new bulletin issued by the Wisconsin Experiment Station. The following counsel given by F. M. White, its author, applies most anywhere.

Gambrel roofs give more room for hay than do gable roofs. This is an im-

portant point to consider.

The barn should have it north and south if the largest amount of direct sunlight is to be let inside. Rectangular, shaped barns are more sat-

isfactory than round ones. The location should be at least 200 feet from the house and handy to a well, sheds, and granakies. Drainage is necessary if the stock is to be kept healthy. Concrete is the best product that can be used for the foundation, ground floor, and wall of the barn.

Build the barn large enough to meet future needs and to permit the handling of the maximum capacity of the farm. If the new barn just holds the stock at time of building, another barn will probably he modeld seen. ably be needed soon.

Combination Whitewash

HERE is a new whitewash formula, nendorsed by the agricultural authorities of Ohio. Slake five quarts of lime with hot water to the thickness of cream. To this add one pint of commercial coal-tar disinfectant and one pint of kerosene. Dilute until it can be applied with a brush or spray pump.

The lime whitens the walls, the kerosent destroys mites, and the coal-tar disinfectant kills disease germs. This formula is especially recommended for disinfecting stables and farm buildings.



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and good digestion go hand in hand, and one of the biggest aids to good digestion is a regular dish of

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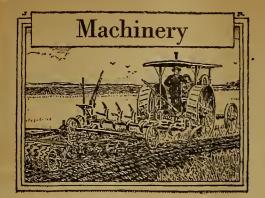


Folding Sawing Mach. Co., 161 W. Harrison St., Chicago, Ill.









Buncher Experience

By A. J. Legg

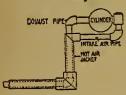
NOTE an inquiry for experience with bunchers in cutting ordinary grain. My neighbor has a buncher and uses it for cutting and bunching wheat, oats, and other small grains. It is an attachment that fits on a mowing machine and attaches the grain as it is at catches the grain as it is cut

His buncher is managed by an extra man who rides on a seat provided for him. After the grain is dumped it is tied by hand. This neighbor told me that he and a driver could cut wheat and oats as fast as four men could tie it. This is quite an improvement over cutting grain by hand with a cradle, but does not come up to the modern binder.

As the buncher attachment costs only about \$10, it is of value to the farmer who has only a small crop and does not feel justified in buying a binder. It works well, saves the grain, and is not hard work. Two men and a team can cut and bunch as much grain in a day as five with a grain cradle. The chief use for a buncher, however, is for cutting grass, especially clover hay that is likely to lose the leaves unless handled very gently.

Success with Distillate

By Samuel Haigh



OR the last I three years we had trouble with our gas engine, which used distillate (a crude grade of oil) as a fuel. The trouble

was imperfect combustion, resulting in thick, black smoke through the exhaust pipe, and coating the spark plug with soot so that the battery would fail to ignite the charge. The cylinder would then flood.

This trouble kept up till last winter, when I made a discovery. I had occasion to draw off the water from the water jacket and replaced it with boiling water before I could start the engine. It seemed to work better. The hot water gave me an inkling as to the cause of the trouble. I therefore attached a lamp heating device to the intake air pipe to heat the air as it was drawn into the chamber, but the suction caused

my lamp to explode, so I gave that up.
In my last and successful attempt I got 12 feet of 2½-inch galvanized iron pipe and a 4-inch galvanized iron elbow, also a 2½-inch elbow, to form an outer casing around the 1½-inch exhaust pipe.

casing around the 1½-inch exhaust pipe. To this casing I connected the intake air pipe so that the air supply was heated very hot by the exhaust, and all my engine troubles were at an end.

I can now start the engine and, after oiling, go away with the assurance that it will run all day without anything but an occasional oiling up. For two and a half years I dreaded the job of running the engine, and no one else would have anything to do with it, as it would choke up and stop every little while. Now I "oil her up," give the heavy fly wheel a twist with all the valves set as the makers intended they should be, and she goes off without a hitch of any kind.

Blast to Fill Gullies

By A. H. Harris

IN MANY parts of the country will be found old fields cleared by the first settlers but abandoned long ago after the fertility of the top soil was exhausted. With practically all of these woodlands now cleared, a more serious condition confronts us. We must begin the upbuilding and reclamation of our soils or go hence. Where erosion has taken place, the banks can be blasted down so as partially to fill the gullies and loosen up the earth for quite a distance.

distance.

For blasting down banks, charges should be spaced from 3 to 5 feet of the edge, and from 4 to 5 feet apart. For each hole use from 3 to 5 pounds of slow-acting dynamite, 40 per cent strength or less. These holes should be drilled to a depth of from one-half to two-thirds that of the bank. Best results are obtained by electrical firing, using a small blasting machine.

For small gullies and ridges one row of holes is sufficient. When gullies are 10 feet or more deep, use two, or even three, rows of such charges placed one back of the other. When the blast is over, some team work will be necessary to fill in certain places, but the work will be easy, owing to the looseness of

the soil.

Here is my remedy for draining small upland pond places: I drill a hole in the center with a two-inch auger, having an extension handle, until a sand bed or water-absorbing soil is encountered. This is easily determined, as the auger is constantly drawn out for cleaning. Load the hole by placing sticks of dynamite on end till within about two feet of top. The last one must be the primer containing cap and fuse.

When fired the blast will leave a hole a foot or more in diameter, which should

a foot or more in diameter, which should be filled with old fence rails, poles, chunks of wood, or other things till within two feet of the top.

Then fill in the remainder of the hole

with dirt. If the pond place covers a very large area, it will be necessary to blast several such holes, but if the work is properly done the good effects will last for many years. Materials will cost from 12 to 15 cents a vertical foot

Dredges for Drainage

THE Government has issued a pamphlet under the title "Excavating Machinery Used in Land Drainage." This publication is not for popular reading, but it contains some excellent points on land drainage, especially in the cost of draining by various systems. It deals mostly with large drainage ditches for taking the excess water off large areas, for which ordinary tile drainage is inadequate.

The various dredges used in this kind

The various dredges used in this kind of work cost from about \$3,000 to \$20,000, and the expense of dismantling and rebuilding a dredge when it is moved from one job to another is seldom less than \$2,000. But even with this high initial expense such dredges have an exceedingly low cost of operahave an exceedingly low cost of opera-tion, frequently less than six cents a cubic yard, and the work is done in a thorough and speedy manner.

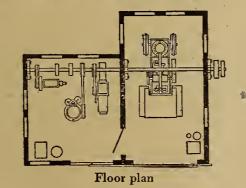
The bulletin is intended for county

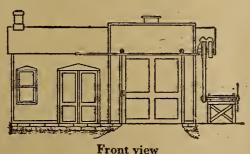
drainage commissioners and other local authorities who, by virtue of their office, are called upon to take charge of drainage improvements. It tells the best kind of machine for each class of work, and under average conditions it recommends large machines for doing work where the ditch is more than 100 square feet in cross-sections. It discourages, as futile, attempts to dig drainage ditches through swamps with teams and scrapers.

Tractor Works Indoors

THE sketches show a convenient farm powerhouse in which a tractor is used for driving a variety of machin-ery. A line shaft runs the length of the building, and there are two pulleys of different sizes on the outside, but protected from the weather by an overhang of the roof.

ventilator over the tractor provides for the escape of burnt gases. A powerhouse of this kind is intended to house such implements as feed grinder, pump, corn sheller, fanning mill, grindstone, lathe, and possibly a forge.





The outside pulleys may be belted to a circular saw, hay baler, or other portable piece of machinery primarily intended for outdoor use. The tractor is sheltered from the weather, yet by simply slipping off the belt and connecting it to the line shaft, you free it from all connection with stationary machinery, and it is ready to do field work or any other jobs around the farm.





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Hearts and Hazards

A Lover and a Confidence Man are Both Disappointed

By EDWIN BAIRD

PART II

HERE'S WHAT HAPPENED IN THE FIRST PART: Ben Abbott learns that Henkel, a confidence man who had once tried to "do" him in Chicago, is asking Mr. Sage, Abbott's employer, to invest a large sum of money in a scheme to manufacture gasoline at a penny a gallon. Abbott goes to the Sage home to give his employer a warning hint and finds the family on the porch, and Gertrude, the beautiful daughter, in animated conversation with Henkel. Abbott is in love with Gertrude but fears that she does not sympathize with his great desire to return to life on the farm. On the following day, however, he starts out for the Sage home again determined to get her answer.

E FOUND her alone in a lawn swing, stationed beneath a patriarchal oak in the side yard. A novel lay open on her lap, but she yard. A novel lay open on her lap, but she wasn't reading; and now, at his approach, she closed the book and dropped it on the seat beside her, and greeted him without rising. She wore pale pink, her best color, and she looked more enchanting than ever. He took the opposite seat.

The afternoon was perfect. A warm breeze, laden with the perfume of many flowers, gently stirred the leaves above. A thrush sang ecstatically on the topmost bough. The spot was like a scented bower, screened from the street by a lilac hedge and from the veranda—whereon sat Mr. and Mrs. Sage—by an almost opaque growth of clematis. Everything was felicitous for his purpose.

He spoke of the weather and then of the thrush, and in both topics she exhibited a polite if tepid interest. Then, reddening somewhat, and feeling warm and big and awkward—as he always felt when near her has enpreashed his

and big and awkward—as he always felt when near her—he approached his

point obliquely:

"Mother and I," he said in his slow way, "drove out to the farm yesterday."

She submitted another polite com-

ment.

"It's beautiful in-the country now—beautiful. I believe you told me once," he continued, watching her anxiously, "that you were 'crazy about country life.'"

"I must have been crazy when I said it," she laughed.
"You mean—you're not—crazy about

"You mean—you're not—crazy about it now?"

"Hardly! If I had to live in the country I would go crazy, sure enough."

"Why?" he asked quietly.

"Oh, because it's so dull, I suppose,"—turning, she looked briefly, though searchingly, toward the street.

"But it's not dull," he insisted. "It's the most exciting thing in the world. It's crammed full of life and interest, and you always feel that you're living close to God." . . . He spoke leaning toward her earnestly, elbows on his knees, watching her face for some reflection of his eager enthusiasm. On most subjects he was slow of speech, but here he was thoroughly at home, and no hesitation impeded his tongue. He was in love with his theme and his talk showed it.

Before he had proceeded far, how-ever, he perceived he had awakened in her not even a lukewarm interest, and

his zest cooled, his eagerness lost its fine edge, and he came lamely to a pause.

"I'm sorry I can't see it that way," she said, and gain turned and looked toward the street, as if exagain turned pecting another caller. He too, following her gaze, looked streetward, but saw nobody there. "What is your ideal of life?" he asked.

'VE never given it much thought, one way or the other; but I suppose it would be one spent largely in traveling. I'd like to visit foreign countries, and see something of this little planet we happen to be

living on."

"But you can do that and still live on a farm.
Farmers often travel—and so do their wives."

"But I tell you I don't like farm life, Mr. Abbott," and the touch of impatience in her voice cut him like a whip. "I couldn't bear it. I'd die! If I had to choose my place of residence I'd choose a big city, like Chicago or—" Abruptly she stopped and looked at him queerly. It had suddenly dawned on her that there was a hidden meaning in all this talk.

Pen dismally filled in the pause:
"Then you couldn't ever bring yourself to marry a farmer?"

Still watching him, she shook her head gently. Her pretty face had softened. At last she understood what he had been trying to say.

"No, Mr. Abbott; at least, not unless I cared for one very, very deeply."

He glanced at her quickly, but his brief hope fled when he saw her eyes. Only compassion was there. Sighing, he rose and picked up his hat and stood looking down at her from his great height. Something he had heard Henkel say to her, night before last, recurred, and he wondered if there was any content hat the last of the same had been also between the same and the wordered in the same and the same had been also between the same and the same a nection between Henkel's utterance and her present

antipathy to country life. He decided there was, and felt strongly urged to denounce Henkel then and there. But his was a methodical, deliberative temperament, not given to impulse, and on second thought he merely said, "Good-by," then turned and loft her

Had he looked back toward the swing, as he descended the brick-paved walk, he might have seen her gazing after him wistfully, as if half minded to call to him. However, he didn't look back.

Emerging on the street he came face to face with Henkel, who had just alighted from his automobile and was crossing the sidewalk toward the gate. This encounter and the memory of Gertrude's expectance stirred the slow wrath smoldering in him. He blocked the path of the smaller man, towering above him like a St. Bernard over a mongrel.

"I advise you to leave this town," said Ben in a

"I advise you to leave this town," said Ben in a quiet voice, "before it gets too disagreeable."

"I don't understand you," said Henkel coldly.

Ben's powerful right hand, hanging loosely at his side, closed in an iron fist, and his face went white.



"But I tell you I don't like farm life, Mr. Abbott"

"I reckon you haven't forgotten the time we met

Henkel's hard, bright eyes shifted from Ben's head nis iisi from his fist to his feet, then back again, as if puzzled and annoyed.

"I never saw you before in my life." Ben drew a deep breath and his clenched fist moved backward a few inches, menacingly. But he con-

"All right," he said. "But just remember my advice." Then he swung off down the street toward home. And now another gaze followed him—though

not a wistful one. The noise of Henkel's motor car, proclaiming the arrival of that young man, stimulated Gertrude boundlessly. No longer wistful, she sped to the lilac hedge and, peering below from this elevation, she beheld Ben and Henkel conversing near the gate. She saw Ben turn abruptly and walk away, and

Henkel staring after him. Then, as Henkel came in her direction, she ran back to the swing, composed herself there and opened the novel. Resting her silk-clad foot on the opposite seat, she agitated the swing lazily to and fro. Her attitude denoted an absorption in the book and a sweet obliviousness to any other presences but also sweet obliviousness to any other presence; but she was fully conscious of the lovely picture she presented, swaying gently in the summer afternoon, surrounded by flowers and foliage, and attired in her

most becoming frock. Thus Henkel found her, apparently unaware of his coming, and occupied the seat lately filled by Ben. Unlike Ben, however, he was at no loss for a well-

turned speech: "You quite took my breath away," he said, retaining her hand as he sat down. "I've been devouring you from behind that trellis yonder."

"Have you fully recovered from the shock?"
"I fear the wound is permanent. At least, my heart is still abnormal. You," said Mr. Henkel, with an eloquent gesture at the pastoral milieu, "belong in this environment as a pearl belongs in a diamond setting."

Her large eyes lowered demurely to the book, permitting him to observe the length of her lashes. A delicate warmth flushed her soft cheeks faintly. "I wonder if you know what you're saying," she murmured without looking up, "or if you mean half

"I MEAN more," he declared. Then he laughed apologetically, as though surprised at his own boldness. "But I really called to-day to talk about—Can you surmise what?"

She idly turned a page of the novel.
"Naturally I have surmised you came to talk about me."

He laughed again, very softly. It was not an unpleasant laugh.

Me."

He laughed again, very softly. It was not an unpleasant laugh.

"I can conceive of no topic," said he, "that would afford me more delight. I could talk about you endlessly. But"—with another graceful wave of his hand—"it seems necessary to bore you with business."

"But I don't know a thing about business, Mr. Henkel."

"Perhaps," he smiled, "you might be willing to learn if you saw a chance to make your father immensely wealthy."

"You mean your gasoline compound?" She was unable to conceal a note of disappointment, being dissatisfied with this new turn in their talk.

He nodded brightly.

"My idea is to form a corporation for making the product. I know there is vast money in it. I've tried to interest your father, but, unfortunately, I haven't achieved any signal success; and now I should like to enlist your aid. No doubt you have considerable influence with your father, Do you suppose you could prevail upon him to make this investment?"

"Probably." she said, wondering how she could best steer the conversation back to its original channel. "But honestly, Mr. Henkel, I don't know a thing about it."

"Then," said Henkel with his brilliant smile, "the thing for me to do is to tell you all about it." And this he proceeded to do in his accomplished manner.

Gertrude made no effort to follow what he said, and presently his words ceased to convey any meaning whatever. Contemplating him, she grew conscious of a vague disturbance in her heart, which signified that her infatuation for this strange young man, of whom she knew almost nothing, was approaching a dangerous stage. But she, far from being alarmed thereat, was thrilled enchantingly. Somewhere in the back of her brain a phrase repeated itself, over and over: Here is my ideal!

Her enchantment grew. His cosmopolitan air, his polished speech, his comely appearance, even the way he wore his clothes—these appealed to her girlish fancy. She contrasted him with Ben, plodding, honest, awkward, and slow, and a mild pity tinged her fascination. . . .

est, awkward, and slow, and a mild pity tinged her fascination.

Henkel spoke on, and pretty soon she evinced in his discourse a genuine interest. He was alluding, in a casual way, to several prominent Chicagoans, whose names she knew as well as her own, and his allusions implied there existed between them a bond of cordial friendship. With avidity she had often read, in the society columns of Chicago newspapers, about the social activities of these people, for theirs was a life that enraptured her; and now, hearing their hallowed names fall lightly from the lips of this interesting young man, he waxed more charming still—more evil, too, if she had but known.

After that, Henkel had an attentive audience, and when at length he took his departure he had a definite promise from her.

RUE to this promise, she cornered her father, after tea, in the library, and, perching herself on an arm of his chair, broached the matter on which

Mr. Henkel had descanted glowingly.
"We mustn't talk business on Sunday night," he

"We mustn't talk business on business all laughingly protested.

"But, Dad, I told him I'd speak to you about it right away, and I don't see why—"

"Oh, so that's the way it is!" Sage put his book aside and regarded her thoughtfully. "You seem to be taking a pretty keen interest in this young man."

"I'm only trying to be nice to him, Dad."

"Take care," he cautioned her, "not to be too 'nice.' You mustn't forget you know nothing about him."

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Handy Farm Kitchen

Use Business Methods in Handling Pots and Pans

By MONICA KELLY

HE up-to-date kitchen is as small and has as little furniture as possible. The combined kitchen and sitting-room may sound cozy and attractive, but it really is unsanitary and a waste of labor because of the presence of lounge, easy chair, sewing basket, books, growing plants, etc. All these things are unrelated to the real purpose of the kitchen. They need care and cleaning daily, and they take up floor space, which inevitably means more steps to take in doing the work of the kitchen

kitchen.

While the farmer may like to eat an appetizing dinner in the warm, cheerful room, or sit and read his newspaper, or work over his accounts in a comfortable chair near the fire, the tired cook, who has spent her whole day in the presence of pots and pans, no matter how shining and attractive they may be, will be much better for a meal in her neat diningroom or an evening in her pretty, restful sittingroom.

room.

By having the kitchen as small as possible and still large enough for the varied equipment with which it must be furnished, the housewife has made the first move toward saving steps. The arrangement of the kitchen furnishings is next in importance. Stove, sink, tables, closets, and small tools must be grouped in the right relation to each other and to the uses for which they are intended. The woman who has to go to the pantry at one end of the room for butter, milk, and eggs, to the shelf over the sink for the egg beater and mixing spoon, to the china closet at the opposite end of the room for a measuring cup and teaspoon, walking in a path that crosses and crisscrosses a dozen times, will use up twice as much energy in the making of a simple cake as the woman who has all her materials grouped together where

grouped together where they will be needed.

they will be needed.

The grouping of utensils in a Pullman car kitchenette or in a quick-lunch establishment, where space is very valuable and cooking must be done in the speediest possible way, will often offer good suggestions to the woman who works in a more commodious place. In general, the pantry or refrigerator in which food is stored should be at the left of the work table, and the serving table should be at the right of the fireless cooker and stove and convenient to the dining-room.

The sink table should

The sink table should be at the right of the sink and the drain board at the left. The china closet or shelves should then be at the left of the drain, and of course should be as near the dining-room as possible. Stove, sink, and work tables should be at the right height for the worker. Most women five feet four inches in height find surfaces thirty inches from the floor easiest to work at but the farm housewife should make her own should make her own tests and plan her

equipment accordingly.
Small utensils should oftenest used. Near the range on open shelves or rack should be the kettle covers, frying pans, griddle, dripping pans, match box, asbestos mats, holders, salt box, and flour and pepper dredgers. The teapor and coffee percolator and tea and coffee canistes may also be near the stove. Near the sink should be found the dishear dish drainer rubber sink stopper may also be near the stove. Near the sink should be found the dishpan, dish drainer, rubber sink stopper, and the scouring and disinfecting materials for the care of the sink. Suspended on the wall above the sink the following small implements might hang: soap shaker, soap dish, dish mop, sink shovel, plate and pot scrapers, vegetable brush, bottle-cleaning brush, funnel, and strainers.

Small Things Save Labor

A KITCHEN cabinet is the best place for the majority of the materials and small utensils used in cooking. A built-in cabinet is well adapted to the needs of the particular kitchen, but unless it is very carefully built, drawers do not fit or the wood warps. The manufactured cabinet must be purchased with care also, remembering that first-class carpentering and high-grade wood are more important than fancy Unless the man of the house is very handy with tools, the ready-made cabinet will be found the cheaper and more satisfactory investment. A steel cabinet with a porcelain table is mouse-proof, nonabsorbent, and costs little more than a wooden one.

Everything about the kitchen should be easy to clean. The walls and woodwork should be white or light in color. The floor should be covered with a good quality of linoleum; a granite, buff, light green, or gray is good. Inlaid linoleum costs \$1.60 and up

a yard, but if properly laid it will stand twelve or fifteen years of hard service. Shelves should be narfifteen years of hard service. Shelves should be narrow and easy to reach. Deep or high shelves are usually dark and afford the temptation to tuck all sorts of articles out of sight so that they result in untidy confusion. A coal range is bound to make dust and soot, hence a kerosene stove and fireless cooker are not only fuel savers, but lessen the amount of the daily dusting and scrubbing.

Occasionally an apparent labor saver turns out to be more bother than it is worth. A food chopper may turn out to be hard to clean, or a combination apple corer, potato parer, corkscrew, and nutmeg grater is bought that performs none of its varied functions efficiently. The practicality of the article rather than its novelty should be tested by the house-wife before buying.

rather than its novelty should be tested by the house-wife before buying.

Following are a few of the time, labor, and step savers which may be purchased nearly everywhere to-day: Bread and cake mixers, loose-bottom cake tin, stationary bowls and mixers, potato ricer, food chopper, dish dryer, dishpan whose shape fits the sink, turbine egg beater, great-grip nut cracker, cherry stoner, covered frying basket, plate scraper, griddle and pan greaser (a soft-haired paint brush does very well), bread slicer, fresh corn grater, slaw cutter, steamers with several compartments.

Good Light is Necessary

THE relation of dining-room and kitchen is very important in planning a convenient kitchen. A slide opening between the two rooms over the serving table is useful, and a system by which foods and

doors will admit needed light into dark closets or halls. These may be of frosted glass if privacy is desired, or of wire glass if there is danger of breakage. A kitchen can scarcely have too many windows.

Artificial light is very important in the kitchen, especially during the winter, when it must be used for hours both morning and evening in the preparation of meals. Poor light means wasted time, extra strain, and inefficient work. Electric light is of course the ideal in artificial light, and farm plants may be installed now for a comparatively small amount. Acetylene gas or gasoline systems also furnish brilliant light, and they cost less than electricity to install. A large farm kitchen will require at least three lights, one each for the range, work table, and sink. If kerosene must be used, mantle lamps are best. The ordinary lamp requires a great deal of care. Alcohol lamps are easier to clean and give a brighter light than kerosene.

A Washday Story

By MRS. EMILY H. WEST

tended to make our home, we had with us only the housekeeping utensils which could be carried by one pack horse, along with food for several weeks' camping out. So the first washday was celebrated with much splashing and merriment in the creek. THEN we found the spot on which we in-

in the creek.

That was the last washday that had any element of fun about it for me for many a day. For twenty years while our homestead gradually changed from a wild, unbroken bit of land 25 miles from the railroad to a prosperous ranch with telephone, daily mail, and all sorts of conveniences, I used to get up early every Monday morning and by nine o'clock had the washing well under way.

The house full of steam, the smell of suds and starch, the general sloppiness of the stove and floor, and the uncertain pitch of my voice indicated that it was just as well for

it was just as well for the family to keep out of the kitchen as much as possible. My meth-ods changed little during these years. I carried water from the creek at first; then, as we grew more prosperous, from the pump in the back yard. A wringer and a copper-bottomed boiler and galvanized iron tubs, instead of the old wooden ones which were al-ways threatening to fall apart, were added to my original simple out-

When, seven years ago, water was piped into the house, it eased up all the other work of the kitchen wonderfully, but somehow Monday was Monday, and washday was washday, and there was no getting around the un-pleasantness of it.

The first move we made in the direction of reform was to transfer washday from the kitchen to the cellar, which up to this time had never been used for anything except storage. My husband put in a cement floor, two small windows, shelves, and a drain. We bought a laundry heater and a boiler for heating water for the house for \$30. The cellar has an entrance into

don't have to waste time gathering them up. A chute from the hall drops the soiled clothes directly into a basket in the cellar. On the shelves I keep soap, bluing, starch, borar, wax, kerosene, and javelle water. A saucepan for making starch, a dishpan to do the starching in, the wash boiler, and clothes stick hang on the walls. The ironing board I leave stand-

ing in position ready for use.

When we were making all these changes my husband got thoroughly interested in the subject of washing, and he thought up more conveniences than I wasning, and he thought up more conveniences than I did. So I wasn't as surprised as I might have been when he came home with a new washing machine. It will run with either kerosene or gasoline, and the motor turns the wringer as well as the washer. The clothes are always out on the line by the time I have clothes are always out on the line by the time I have to prepare dinner, and my dress is still presentable when I am through. We also use the motor to turn other light machinery, like the ice-cream freezer, the churn, and the food chopper, but of course these uses are only side issues. I have a gasoline iron now, too, which simplifies the work of ironing a good deal.

When I really set myself to the problem of making

When I really set myself to the problem of making the weekly washday pleasanter, I found that I had for years been doing things in a wasteful way. I had washed on Monday simply because it was the custom, when Tuesday is a very much better day. Now on Monday I brush up the living-room, dining-room, and bedrooms, which always get more or less disorderly over Sunday, mend and soak the clothes, bake and make provision for Tuesday's meals. This leaves me prepared to begin first thing in the morning with the actual washing of the clothes.



Sink, stove, and work table are well situated for efficient work in this kitchen. Pans and kettles are within easy reach and the extra sink and oil stove are convenient

dishes are taken from one room to the other-on a wheeled tray saves time and many steps, and makes I keep all my washing materials together so that I table service without a helper very much easier. China and table linen should be easily accessible from

either room. The most convenient place for the telephone in most farm homes is in the kitchen, where it may be answered promptly. A desk telephone is more expensive to install than a wall telephone, but of course it is much more comfortable to use. The housekeeper who has a wall telephone should have a high stool

on which she may sit while telephoning.

In farm houses where ice is not available in summer, the storing of food is a problem. Articles which must be kept cool are stored in cellars, or in outside spring houses or rock houses especially built for coolness. If the farm woman has a cellar for this purpose, the most convenient device she can secure is a dumb waiter to carry food up and down. The trap door in the kitchen floor leading to the cellar is an abomination—ugly, dangerous, and wasteful of time and strength. The best plan is to have the stairs go down from a little hallway, the walls of which may be utilized for hanging brooms, dustpan, mop, etc., or for a closet for wraps used by the family in doing chores. If an outdoor cellar or store-room is used for storing foods, the housewife will need a wheeled cart

to save her trips back and forth. Lighting and ventilation are very important in the kitchen. In general, windows should be high enough from the floor so that the work table will not interfere with them. The best ventilation is secured by having windows which open easily from both top and bottom, or by having small high windows which open by means of a pulley and rope. Glass panels on

Good Health Talks

By DR. DAVID E. SPAHR



A SUBSCRIBER writes that after having his face treated by the X-ray it left the pores open and the skin coarse and rough. X-ray burns require three to five times as long to recover as any other kind of a burn, as they dead-

en the nerves and interfere with the nutrition of the part. interfere with the nutrition of the part. Where they are slight and only cause dermatitis and a roughening of the skin, as in this case, recovery may possibly be delayed a year or two. Remedies are disappointing, but if the surface is not too extensive, the burns might be painted over with ordinary white lead lightly each night. This treatment is valuable for its soothing, protecting, and astringent properties.

Constipation

We have two boys, four and seven years old, who suffer from constipation. Have regulated their diet and give them laxatives. What more can I do? The oldest boy has contracted the habit of bed-wetting just lately. Mrs. C. W. P., Kansas.

POSSIBLY all of your boys need a little more exercise in the open air, running, playing, and bicycle-riding, or you might use a suppository of glycerin or soap, or an enema of soapsuds. For your boy's enuresis, withhold all liquids from him after dinner, and keep his howels active.

his bowels active.

Epilepsy

My son, aged ten, has had epilepsy since he was four years old. He does not have it very often—only occasionally, two or three times a day. He still has a good memory. The doctor had him circumcised, and now he thinks he ought to have his tonsils taken out. The doctor is giving him some kind of bromide three times daily.

I. M. M., Wisconsin.

EPILEPSY in a boy of that age is very stubborn, and cures are extremely rare. If there is any cure it is to be found in some form of the bromider

If the tonsils are diseased, have them removed at once.

Oedema of the Lungs

My husband awoke in the night choking and could hardly breathe, with such a noise in his chest and throat like something boiling. His pulse was weak, pain in chest, blood pressure 190. They gave him whisky and water, and then he spit up some white froth that does not dissolve. What ailed him and what can I do for him?

Mrs. R. B. W., Vermont.

HE HAD pulmonary ædema, caused by a weak heart with, no doubt, a valvular lesion, and with what the doctors call failing compensation.

He should take heart tonics and stimulants, with plenty of laxatives, and go to bed without his supper, and live a very quiet, simple life.

Insomnia

I suffer from little boils or lumps that rise up under the skin, and get red and sore, but do not come to a head, and disappear as suddenly as they come. I cannot sleep at night, do not get sleepy night or day. Am about at my work, but fear I am on the border of a breakdown.

Mrs. W. S., California.

OU failed to give your age in your I meager description of your case. You are certainly facing a grave crisis, which might be due to overwork, nervous strain, intestinal infection, or menstrual irregularities. Clean out your bowels thoroughly and perhaps you will sleep.

Disordered Circulation

I am twenty-one years old, and since last June I have been troubled with blood rushing to my head. While washing or working, hot feelings run up and down my body through my legs and breast. Have pains in my neck and head. I am unable to sleep because of the thumping in my head.

B. A. H., South Carolina.

TAKE ten grains of bromide of pot-ash in a teaspoonful of syrup of pepsin every three hours until relieved, then every night and morning as required.



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The Feud of Wapsidoodle and Snollygoster

By Georges Saint Amour and Newton Fuessle

Part I

BOBBIE and his parents lived on the desert. The little family had come here from the East because Mama's health was poor. The doctors had said that here in this high, dry country, where the air was rare and bracing, Mama would get well.

For miles around there were no white people. Daddy spent most of his time.

people. Daddy spent most of his time out among the foothills of the Rocky Mountains searching for gold and silver. Sometimes he was gone for days and days. While he was gone, Mama spent much of her time sewing and painting pictures, for she was an artist. Daddy would return to the bungalow with wondrous stories in his head, and these he would recount to Bobbie as the little family sat evenings in front of their hearth with its dancing fire of

mesquite roots.

"Daddy," said Bobbie one evening, for the hundredth time, "tell me the story about Wapsidoodle and Snollygoster!"

Daddy smiled. Many, many times he had recounted the story of the two ferocious beasts of the mountains.

"Wapsidoodle is still waiting there on top of the mountain," began Daddy, drawing the boy closer to him. "He can't decide whether to come down and attack Snollygoster or whether to wait for Snollygoster to come up and make war on him. Wapsidoodle's seven tails are sticking straight into the air. His long hair bristles. He is angry and insulted. His four ears are cocked each in a different direction so that he will in a different direction so that he will be sure to hear the farthest, faintest be sure to hear the farthest, faintest sound of his enemy's approach. He keeps his fifteen legs braced all the time, ready to leap through the air at Snolly. His three eyes, one at the tip of his longest tail, you know, are open night and day, watching for signs of trouble."

"How funny he must look, Daddy," observed Bobbie.

"No: he has more of a sad look my

"No; he has more of a sad look, my boy. You see, poor Wapsidoodle hasn't slept now for nearly six months. And Snollygoster's legs are braced, too, as he hides near the foot of the mountain and thinks night and day of his ancient

"The fight will be terrible when these two long-haired fellows clash. Wapsidoodle weighs two tons, you know, and Snolly weighs even more. The desert will tremble when the big fight starts. Some folks will think there is an earthquake; but we will know ahead of time, Bobbie; what that terrible racket means."

"My! My! Daddy-" began Bobbie breathlessly, but Daddy continued with

"Many years ago I understand that these two fellows had trouble on the top of the mountains. That's when Snolly-goster was hurled down to the bottom. The Indians and half-breeds tell me that when Snollygoster came tumbling down he clawed so desperately that he tore the hole into the desert, which they call Beast's Canyon."

"What are they so mad about?" demanded Bobbie, seeing a chance to put

a question.
"They're just jealous, I guess," replied Daddy. "Wapsidoodle thinks that perhaps Snollygoster is a better fighter and Snolly thinks the same. than he is, and Snolly thinks the same. Then each thinks the other can see bet-

Then each thinks the other can see better and farther. Snolly, you know, has only two eyes, close together near his nose, and he is frightfully jealous of that eye at the end of Wapsidoodle's longest tail. And I tell you that is a regular searchlight of an eye, too."

"I bet they've had some awful fights!" broke in Bobbie excitedly. Do they bite or just hit?"

"That's where Snolly's got the advantage," replied Daddy. "He can hit, and bite too. He has a big mouth and ugly crooked teeth. Wapsy has to depend on his powerful legs and fierce claws and on his tails, each of which is provided with a sort of club on the end of it. But his mouth wasn't made to fight with."

For several minutes Bobbie sat very

For several minutes Bobbie sat very still. He was thinking about these two beasts waiting to fight it out, to end their ancient feud. Bobby was sorry for one, then sorry for the other. "Do Snollygoster and Wapsidoodle like boys?" demanded Bobbie a little

later, in earnest tones.

"Yes, sir, they do," answered the father gravely.
"Maybe if I ask them not to fight, and

told them how foolish it is to be jealous, perhaps they'd be ashamed of themselves and everything would be all right," asserted the boy.
"Very possibly it would," agreed the

"I just loves Wapsy and Snolly," declared Bobbie so enthusiastically that he quite forgot to be careful about his grammar. "I don't want them to fight and kill each other."

Mama rose next morning feeling unusually strong and well, so well in fact that Daddy decided he would make an exploration of a new part of the near-by mountain. When he had gone and after Mama had set to work at her painting, Bobbie began to think once more of the two formidable enemies, of their jealousy and hatred of each other.

He thought and thought, gravely and earnestly, in an effort to find some way to prevent the fight which impended between the two mighty beasts.

[TO BE CONTINUED]

New Puzzles

Concealed Geography

Each of the following sentences contains the name of a city or State in the United States:

I liked everything but the butter;

that was impossible.

The cape May wore was entirely too

elaborate for the occasion. I expect to see Charles to-night, no

matter what happens.

I should call that color a downright

The manager I engaged turned out to

If Mary lands to-night, she will be

with us in the morning. If I finish the washing to-night, I'll

be ready to do the family mending to-

I would not say I can't, but I feel that can't face the situation.

you go into the bear's den, very well; but I consider it foolhardy.

Two miles east on West Street will take you to South Street. He called the little hut a house, and

dwelt there in peace and happiness. They gave the tired Indian a drink and made a lifelong friend.

We called the little Dublin miss our Irish Rose.

With the ore gone financiers thought it a good time to sell the mine.

Answers to Puzzles

Puzzles Printed Last Issue

Mr. Busybody's Inquiries

Mr. Busybody is told that the hole when finished was 105 inches deep.

Hearts and Hazards

[CONTINUED FROM PAGE 20]

"But I do know something about him," she asserted. "I know he's the most interesting man I've ever met; and he's on very intimate terms with all the best people in Chicago."

"How in the world did you learn that?" he exclaimed.

"He told me so himself," said Gertrude.

"Oh!" Sage nodded solemnly. "Of course. I might have known you learned

She drew back and surveyed him with

sudden suspicion.

"Dad, are you laughing at me? Yes, I see you are. Well, just wait a min-ute!"—she slipped from his chair and hurried to a desk, where she wrote down each of the familiar names mentioned by Henkel. Returning, she extended the paper to her father. "Just to prove paper to her father. "Just to prove that you are doing Mr. Henkel a grave injustice, I want you to write to every one of these people and ask them if Mr. Henkel isn't a friend of theirs. Will you do that much?"

"Gladly," he smiled, pocketing the

paper.

"And then, if you find that he does know these people, will you invest in his proposition?"

He shook his head at her.

"But, Dad! You mean you won't invest at all?"

"I mean I won't invest simply because he happens to know some of the 'best people' in Chicago."

"But why not?" she cried, surprised.

THE following morning he received a report from a mercantile agency concerning Presley Henkel, and this, and two confidential letters which came in the morning mail, persuaded him to believe that in dealing with Mr. Henkel one would do well to beware of spiders.

Thus, when Henkel appeared before him, Sage was on his guard. He entered the office, smiling and bland, hard upon twelve o'clock, with an invitation to lunch.

to lunch.

"I shan't be lunching for an hour yet," said Sage; and the touch of reserve in his voice indicated that when

that hour came he would lunch alone.
"I'm sorry," said Henkel. "I like to
talk business while eating, and I had
hoped that we might reach an agree-

hoped that we might reach an agreement about our—about the investment you are considering."

"Yes. Too bad. But I've just about reached a decision, Mr. Henkel."

"Ah! A favorable one, I hope?"

"Well, no; not exactly. In fact," said Sage, glancing at the commercial report lying upon his desk, "I've about decided not to go into it."

Henkel's quick, alert eye darted at the report; and quite suddenly a remarkable expression crossed his countenance—his mask was lowered, revealing an evil soul—but only momentarily. In an evil soul—but only momentarily. In another second he had recaptured his

poise, and was again affable and smooth.
"Mr. Sage, don't, I beg of you, be influenced by any adverse statement of my pecuniary standing. Perhaps I have not made my position sufficiently clear: I have no money—that is, no money of my own. I've given you my word that

I will put up an amount equivalent to yours, in case we enter this venture. This money will be supplied by my This money will be supplied by my Uncle Rudolph, who has pledged himself to back me with almost any sum, provided only that I find a partner who will furnish a like amount. Perhaps you are acquainted with my uncle, Mr. Sage—Rudolph Henkel of Chicago."

"I've heard of him. He's in the clothing business, isn't he?"

"Clothing and dry goods. Made a very tidy sum at it, too; more than five millions. If you prefer, I shall be happy to bring you a letter from him, substantiating all I've said."

"That, no doubt, would be advisable; but, after all, the whole thing hinges on whether or not you can actually make

whether or not you can actually make gasoline at one cent a gallon. I've seen no proof of it yet, you know."

"I know. However, I shall telegraph to-day to my assistant in Chicago for a sample of the compound, and will have

it analyzed by a competent chemist and its cost of production determined. I want to have everything square and aboveboard, Mr. Sage."

Around three o'clock on this Monday afternoon Sage wrote two letters to Chicago, and, though each asked the same specific question, both were directed to different persons—one to Rudolph

ed to different persons—one to Rudolph Henkel, the other to a genealogist. Later, just as he was starting home, he found the bit of paper which he had carelessly put in his pocket last night; and, more to fulfill his promise to Gertrude than with any hope of gain, he dictated a letter of inquiry to each of the names written thereon.

Three of these letters were answered that week, and in every case the answer came, not from the person addressed, but from the person's secretary. All, he learned, were out of town for the summer. Receiving no response to his other letters, he assumed that these people also were away and, lacking secretaries, that their mail had been forwarded. On that their mail had been forwarded. On Thursday he heard from the genealogist, who informed him that a careful search failed to reveal that Rudolph Henkel, the millionaire, had a nephew named Presley Henkel.

A few hours after the arrival of this epistle, Henkel entered Sage's office. The young man carried an oblong parcel and his face was beaming.

"I've got the stuff at last," he chuckled, and lovingly tapped th parcel. "Now if you will come with me to a chemist—"
"I think not," said Sage, and there was a certain cold finality in his voice which caused the other's radiance to suffer a change.

which caused the other's radiance to suffer a change.

"W-why," he stammered, taken aback,
"what's happened? I thought—of course, if it's not convenient just now—"

"I've decided not to invest in your proposition, Mr. Henkel."

"Isn't this decision rather sudden?"

"It's sufficiently judicious, I think."

Henkel sat down, slowly, and placed his parcel beside him on the floor. And again though only for an instant, a ma-

his parcel beside him on the floor. And again, though only for an instant, a malignant glitter flashed in his eyes. Facing his victim across the flat-topped desk, he went oilily ahead:

"I can see some untoward influence has been at work, Mr. Sage. You discredit my business connections. It surely can't be that you doubt the merit of my discovery, else you would willof my discovery, else you would willingly agree to an impartial test. Perhaps," he added hopefully, extracting an envelope from an inner coat pocket, "if you will read this letter from my uncle—"

"Thanks; but it wouldn't affect my decision in the least," waving the letter aside. Suddenly, struck by another thought, Sage looked curiously at the agreeable young man. "By the way, Mr. Henkel, where is your uncle?"

He was undisturbed by the query.
"He's in South America now, Mr.

He was undisturbed by the query.

"He's in South America now, Mr. Sage. This letter," removing a sheet of paper from the envelope, "was written before his departure. I suppose," said Henkel, with a winning smile, "Uncle Rudolph was afraid I might get in a hole, and it seems I have. Won't you read the letter, Mr. Sage? It really proves everything I've told you."

Thus persuaded, Sage read the letter, typewritten on a letterhead of the Hen-

typewritten on a letterhead of the Henkel Clothing Company. It seemed entirely genuine; but when he handed it

back:

"I see. However, it doesn't change my mind. And now I hope you will excuse me, Mr. Henkel; I'm a busy man this morning." Sage rose, and remained standing till his caller had likewise risen. He then sat down and resumed his work where it had been interrupted.

"This is quite final, is it, Mr. Sage?"

"Quite. Good-day, Mr. Henkel."

Henkel stood a moment longer, irresolute, looking narrowly at the other man, who didn't glance up from his desk. Then, with no further word, he quit the office.

This time his mask was lowered till he reached his automobile and motored away in the direction of Sage's home. [TO BE CONTINUED]





Then Mother got up and took it all away from him

Letters From a June Bride

Betty Helps with Apple Harvest



SISTER: The last carload of apples was shipped last week, and is safely in cold storage by this time, so I am having a kind of "let down"

feeling after those three strenuous weeks in the orchard. Before we began weeks in the orchard. Before we began our campaign, however, Billy and I both attended packing school, which meets for three days each summer at the armory in town, and is attended by hundreds of enthusiastic orchardists and their wives from all parts of the

There I took my first lessons in sorting, grading, and box-packing, and came away feeling that I had mastered the general principles of this science, and only needed some actual experience to make me of real assistance to Billy in

his orchard work.

In order to cut down the picking expenses this year, Billy had employed children from twelve to nineteen years

children from twelve to nineteen years of age, which meant, of course, that there had to be someone there all the time to watch them. So he put me in charge of this juvenile crew, calling me by the high-sounding title of "General Superintendent of the Picking Gang."

I was kept pretty busy all day, and didn't have a minute to drink in the wonderful view from the orchard hill. It was my business to see that the tall boys scaled the tops of the trees and that the girls were given the responsibility of the lower branches; that they kept the rows straight; that they didn't break any horticultural or anatomical limbs; that they didn't destroy next year's fruit buds; that they didn't mix different varieties in the same basket, and that each one was prodded on to his and that each one was prodded on to his

and that each one was prodded on to his best effort.

George, the tenant's fourteen-year-old son, drove Valley and a little low red cart, into which, with careful packing, we could squeeze sixteen half-bushel baskets. These were driven off to the packing shed while we did our level best to have that many more filled by the time he returned. I imagine they grew weary of hearing my continual admoniweary of hearing my continual admonition to "handle the apples just as if they were eggs," but it seemed to have its effect, and Billy said the apples came to the sorting tables in better shape this year than they did last year with men

I carried around with me large baggage tags with wire fasteners, and to each tree I fastened one of these, markeach tree I lastened one of these, marking with indelible pencil any suggestions for pruning or spraying. "Upper limb dead, badly affected with aphis" will tell a tale when spraying time comes, and Billy thinks will be of great help to him.

I WISH you might be here some time during the apple-picking season. You would be interested to see what a business it is and how systematically every-thing is dispatched. The pickers, the sorters, the packers, and the "headers" of the barrels are so organized that scarcely a motion is lost. I got all the dinner things ready pefore I went out in the morning, so that Nanny could leave the orchard at eleven o'clock and

have the orchard at eleven o clock and have the dinner steaming when Billy and I came in at twelve, tired and so hungry we could scarcely wait to begin. Fortunately all the crew, except a few who got board at our tenants, carried their dinners in little tin buckets, which relieved me of that responsibility and gave me a chance to do my share of the orchard work, which quite made up for the little bit of extra cash which we had to pay them.

Life goes on as usual here. Though I do not get away from the farm often, I do not get lonely, for Mrs. Lamb, our tenant's wife, comes up numerous times each day for a "round of thread" (enough to go in a needle), or to buy a "penny's worth of hairpins" or a cake a "penny's worth of hairpins" or a cake of soap, and in the cozy environment of my kitchen we discuss every subject, from the seven deadly sins to proper infant diet. You will not believe me when I tell you that, when only three months old, their baby had partaken of the joys of gravy, mashed potatoes, watermelon, and other delicacies, including coffee and sugar, which is taken three times a day by all nine of them! In spite of this that baby is as healthy and spite of this that baby is as healthy and



sweet as any child I've ever seen, which I must admit, al-though it doesn't point a very good moral.

This morning the whole family started out in our spring wagon for a fifteen-mile drive in spring wagon for a lifteen-mile drive in the mountains to an apple-butter "mak-in" which is one of the real social events of our country. Two or three barrels of "snits" are prepared the day before, and at sun-up the big copper kettle is hung over an open fire and kept boiling until way into the night, when the butter is "taken off," as we

A boy and girl try their hand at stirring for a time—back and forth with the long-handled wooden stirrer. If it sputters over, the boy has his one legitimate opportunity to kiss the girl, and thus the excitement is kept up. Turn by turn they go all day long, and at night the music and dancing begin—banjos and mouth harps in glorious concert

LAST week we had apple-butter making here, too, though with none of these interesting extras. Billy wanted to get some copper coils for our steam outfit, which he said would enable us to make quantities of apple butter each year with a minimum of time and labor. He even went so far as to make inquiries about the cost of the coils, but I persuaded him that it wouldn't be practical to go to this expense now. There are so many other modern conveniences which we need before this, and, besides, there we need before this, and, besides, there is something fascinating about the oldfashioned way, with a copper kettle over a big fire right out in the open. We did have one improvement, however. We bought a small cider press, which we put in our new wood shed, and which made it possible for us to work even though it was pouring rain

We like our butter made with cider instead of sugar, which means that the cider has to be boiled down the first day to one third its original measure and then heated up again early the next morning before the "snits" are fed into

it. While the cider was boiling we peeled and cut up the apples.

We sold a lot of cider to the neighbors, more than enough to pay for our press, to say nothing of the cider for our own use. Several of the neighbors came in to help, so that we had two barrels full by evening and still had time rels full by evening, and still had time to get the kitchen in order before time to begin supper. The next morning, as soon as it was light, Billy put the cider on to heat, and then we began feeding in the apples as many as the kettle

in the apples, as many as the kettle would hold without sputtering over. When these had cooked down we added more, until the two barrels were empty and several more bushels fed into it. Everything went off smoothly, the fire was put out about five-thirty, and we had the butter in the stone crocks and the kettle cleaned before dark. We seasoned with a little cinnamon, using only about a tablespoonful for the whole kettle, as we think it is much better without any spices.

I hope to sell my apple butter to individual customers in the cities, as Mrs. Jones did last year, and I think I shall get up a letter of advertisement to send to my city friends before long, though the best time to sell it is near the Christmas season, when such things are always at their best. I have made inquiries and I shall be able to get crocks holding a half-gallon, with clamp-down tops, and this will make the packing much easier and the danger of accident

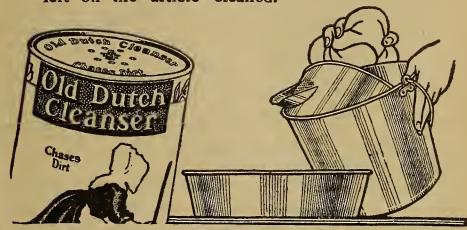
I have a thrill of pride every time I take a peep at my cellar fruit closet with its rows and rows of good things for the winter. In spite of all the extra work of getting settled in our new home, and the strain of being chief manager, I have managed to do quite a little can-ning. Sugar was so high that I made many good resolutions about not putting up much fruit, but I couldn't help yielding to the temptation occasionally, and, besides, some of it can be put up so nicely without sugar.

Please do send me the fruit-cake recipe you mentioned. I shall need Jette it soon now.



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"Preparedness" for Children

By Winifred Mann

"MY CHILDREN had a good raising. If they are not successful it's their own fault."

How often we hear such complacent expressions from parents of the old

And yet, did they have a good rear-

Personally I am glad I live in a day when, for two or three dollars yearly, a farmer's wife can obtain the best magazines, full of wise, sensible help for life's biggest problem—the guidance of her

offspring.

His majesty, the baby, usually gets plenty of attention, but when John or Jane trudge off to school too many mothers seem to lose some of the early interest.

Before I proceed further let me caution mothers, young or old, against sending a little one to school without explaining about bad habits and why they must not be indulged in. Times are changing very rapidly. The white light of Knowledge must light the way if we would have "safety first" before the harm is done.

My years as a teacher of other proceed.

My years as a teacher of other peo-ple's children taught me why I must be absolutely frank and truthful with my children.

children.
Of course, at school age the curls are gone. Perhaps freckles mar the clear baby skin. Baby teeth are changing for the permanent ones.
If the first teeth are decayed, chewing causes pain, and is neglected, making digestion difficult. This causes bad breath and bowel disorders, making the child nervous and irritable.

when at five years a youngster has more than five teeth on either side of either jaw, mothers should know that the last one is a permanent one.

If there are cavities in the baby teeth they should be alread and filled with

If there are cavities in the baby teeth they should be cleaned and filled with silver or some other inexpensive material. This insures sanitary chewing until the tooth is ready to come out and its place filled by the permanent one. Remember that decayed teeth or sore gums may cause your child to fall an easy victim to germs of diphtheria, pneumonia, typhoid, and the like.

A patient said to me one day: "Teeth are panicky things while they hurt, but

are panicky things while they hurt, but of course not dangerous. No one ever dies on account of them."

I do not agree with her. It is quite

possible many deaths yearly are due to ignorant neglect of teeth.

Decaying food particles form acids which injure the best of teeth, so teach the children to brush them every night

and morning.
As a dentist's assistant for a number of years I had opportunity to observe a vast number of sets of teeth, and it is surprising how few of them were regular and well set.

A great deal can be done toward improving this if mothers will give intelligent attention to it and spend a little money with the dentist rather than on frills and candy.

My own front teeth are very prominent and irregular, a condition which could have been remedied by applying a retaining band of silver when I was a

I suffered agonies with headache, had my long braid of hair cut off at nine, and later failed in the high school be-

cause my father considered spectacles for children an affectation.

As I learned later, my eyes were not alike—never had been. Yet if I'd had a really good "raising" I need not have suffered so much misery, nor been punished at every turn for supposed irrigished.

ished at every turn for supposed irritable "meanness."

A pupil in my school learned her spelling lessons while scowling, and frequently misspelled them. Instead of applying a switch I wrote the parents, advising them to consult an oculist about her eves

her eyes. I brought a hornet's nest about my ears. The mother informed me she'd had twelve children and nobody ever saw anything wrong with any of them before.

I insisted on an examination. A cometent optician ordered her removed from school for a year, put colored glasses on her a while, and later fitted her with specially ground lenses.

During four years' teaching I found four children whose eyesight, on proper investigation, needed the best of skill-

We will have fewer nervous wrecks

We will have fewer nervous wrecks if we use an ounce of prevention.

As to that, poor children should be cared for as well as the more prosperous, without regard to the whims of ignorant parents. Money spent by a district for physical examination of all school children is the very best investment for "preparedness" that any community can make. munity can make.

munity can make.

Remembering past suffering, I advise organizations of country women to consider this matter, bring it up for discussion at their school meetings and, if necessary, provide funds to pay a reliable physician to act as examiner.

Motherhood is an affair of state as well as a matter of food and clothing. We should not shirk our duty of providing for the comfort or improvement of

ing for the comfort or improvement of our neighbor's child, since any improvement may react in benefit to our own. The fact remains: heredity counts one half and environment the other half in preparing our young people to compete successfully in the battle of life.

Canning Chicken in Glass By Mrs. H. A. Duff

I HAVE been experimenting a little on my own account and find that chicken can be kept perfectly in glass cans.

I dress the chicken, washing and cleaning it thoroughly, joint, and place the pieces in cans. Do not pack too closely or it may slip from the bones in removing from the cans. Pour in cold water to fill the cans about one third full, place lids on loosely, and set the cans in a wash boiler or some other vessel having a false bottom and tight-fitting lid. A commercial cooker is good for this purpose.

for this purpose.

Pour in three gallons or more of cold water, place filled cans in the container, bring to a boil, and boil rapidly enough to form a good volume of steam for one

If any of the cans are not full of liquid when cooked, fill them with boiling water. Use nothing but new rubbers that have been thoroughly scalded, and tighten the lids when still boiling hot so they will be hermetically sealed. Set aside to cool, and store in a cool dark place dark place.

dark place.

One hour's steaming is the time required for a young chicken weighing from 2 to 2½ pounds. Older chickens require more time.

Better err on the side of too much cooking, so it will then be sure to keep well. If cooked too long it will slip from the bones in preparing for the table, but the quality will in no way be impaired.

Editor's Note: Not all Farm and Fireside subscribers have succeeded so well in canning chicken and other meats by the method described by Mrs. Duff. Unless the cooking and the sealing of the cans insure perfect sterilization, the canned meat will not keep well. Cooking as suggested by Mrs. Duff for a longer period—two or three hours—is a safeguard against spoilage. But the most perfect insurance against the spoiling of canned meat or vegetables is the use of the steam canning outfit described in Farm and Fireside, issue of December 18, 1915.

The steam-pressure outfit, by confining the steam, furnishes such a hot temperature that all germs are killed beyond chance of making trouble in the canned product.



Cookery

Tempting Cake Fillings

By Edith C. Armbruster

WHEN the regulation chocolate, cocoanut, and lemon fillings begin to pall, try one of the following recipes, which are both "different" and practical.

FRUIT GLAZE—Beat the whites of two eggs until very stiff. Add a teaspoonful of thick strawberry jam. Put the filling between the layers and on top, and let stand until the top glazes over. It is also good made with raspberry jam.

PEANUT-BUTTER FROSTING—Pour one-fourth cupful of boiling water on one-fourth cupful of peanut butter and stir until smooth; then stir in sifted con-fectioner's sugar until it is thick enough to spread.

FRUIT WHIP FILLING—Whip one cupful of cream until thick, add a heaping tablespoonful of powdered sugar, and a teaspoonful of vanilla. Spread the layers of cake first with grated pineapple, thinly client arounds are because the thinly sliced oranges or bananas, then cover thickly with the cream. The three fruits combined also make a delectable

PRUNE ALMOND—Boil together one cupful of granulated sugar and onethird cupful of boiling water without stirring until it forms a soft ball in cold water. Pour it over the stiffly beaten white of an egg and beat until creamy. Add one-half cupful of stoned stewed prunes and one-third cupful of blanched chopped almonds. Beat well, then put between layers of cake.

MAPLE NUT—Boil two cupfuls of maple syrup until it strings; pour over the stiffly beaten whites of two eggs and beat until thick and creamy. Add one-half cupful of chopped walnuts; then

COFFEE CREAM—Cream together one cupful of confectioner's sugar with onefourth cupful of butter; add two teaspoonfuls of very strong cold coffee, one teaspoonful of vanilla, and two table-spoonfuls of dry cocoa. Spread while cake is slightly warm.

ALMOND APRICOT—Mix well together three tablespoonfuls of ground almonds, three tablespoonfuls of apricot jam, and one teaspoonful of almond extract. Spread between layers, and cover the top with sweetened whipped cream.

Sour CREAM—Whip one cupful of sour cream with the white of an egg. Chop fine one-half cupful of pecan meats and add to the cream. Add one teaspoonful of vanilla and sufficient confectioner's sugar to sweeten.

Packing the School Lunch By Ruth M. Boylè

HEMMED or fringed squares of cotton crêpe make good napkins for the school lunch box. They are easily washed and do not need to be ironed. Use two napkins—one for packing the lunch and one for the child's use when eating his lunch. In dusty seasons food

eating his lunch. In dusty seasons food should be wrapped especially well. Sandwiches and other articles should be wrapped separately in neat parcels with paraffin paper, which may be bought at a low price, especially if purchased in large quantities. Small jelly glasses, paper cups, and peanut butter or cold cream jars of various sizes may be used for the moist foods.

In choosing a lunch box, ventilation, ease of packing, and carrying, and particularly the ease with which it can be washed and scalded, should be considered. Metal boxes and cans may be more thoroughly scalded and cleansed than baskets or elaborate lunch boxes with separate compartments for dishes, knives, forks and spoons, but if the latter are carefully packed so that food cannot spill out; they have the advantage of being more quickly filled than any other type of box. This is important for the mother who must prepare the children's lunches at the busiest hour of the day. Baskets are naturally well ventilated, but several holes punched hour of the day. Baskets are naturally wellventilated, but several holes punched in the metal box or can will let in suffi-

cient air.

When there are several children in a household for whom lunches must be put up, strong, well-constructed lunch boxes with compartments for keeping food hot and cold and holding liquids are very satisfactory. Many children are finicky about having sandwich filling of any sort soak into bread, and for this reason many mothers simply slice the bread, butter it lightly and let an older child prepare the sandwiches at the school. prepare the sandwiches at the school. Bananas, oranges, and other food having a strong odor are apt to flavor the sandwiches and cake, and so should be packed separately or the rest of the lunch properly protected by special

wrapping.

An ordinary piece of pie is seldom palatable by the time it has been packed in a box with other food for four hours. Individual pies, on the other hand, de-light the children and are in perfect condition when the lunch is opened. In-dividual custards, cup cakes, and simple puddings in custard dishes are simple to puddings in custard dishes are simple to prepare, and there is a fascination for children in this method of service. Scalloped corn, baked beans, rice with cheese, and other dishes may be put in custard dishes fitted with a lid, and these may be heated by the child on the school stove.

Many mothers are doing this to provide the necessary hot dish for their children's lunches in districts in which hot foods are not prepared at the school.

Household Hints

To RAISE THE NAP—To revive the appearance of a suit that is becoming so worn as to be shiny in certain spots, a bit of distilled white vinegar, diluted in water, rubbed on with a white woolen cloth, will raise the nap and give it a look of newness that will make the suit of good service for some weeks to come.

J. M., Ohio.

To KEEP WOOD FROM SPLITTING—When nailing hard wood run the nail through a cake of soap before using it. This prevents it from splitting the wood.

I. G. C. Massachusetts. L. G. C., Massachusetts.

To Remove Grease Spots—Plain chalk pulverized will remove spots of grease from silk or cloth as well as the more expensive French mixture.

M. E. Y., Connecticut.

CLEANING HARD-WOOD FLOORS-A little kerosene or milk added to the water used in sponging finished floors will serve to brighten the finish, either paint or oil. C. S., Pennsylvania.

FOR THE CUP OF COCOA—A pinch of salt and a few drops of vanilla added to boiling cocoa greatly improve the flavor. Boil several minutes, as it not only makes cocoa richer but far more digestible.

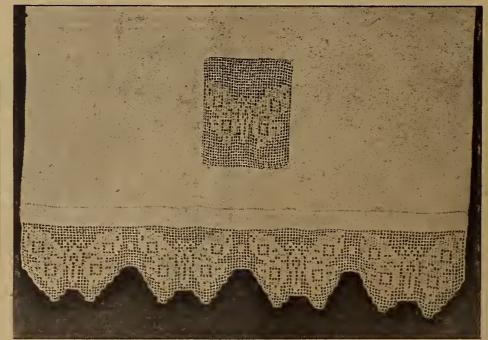
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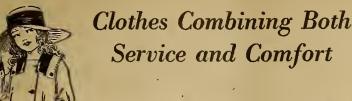
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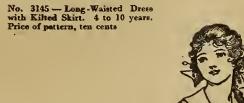


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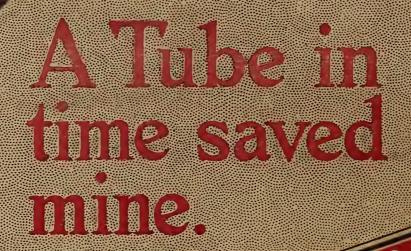
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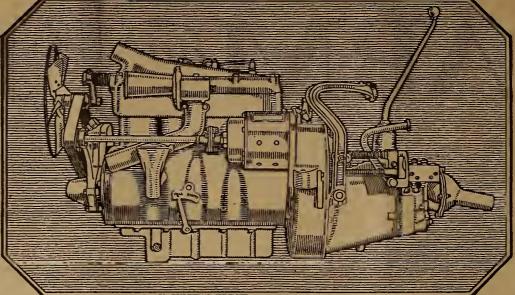
ESTABLISHED 1877

5 cents a copy

Saturday, November 4, 1916



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IXWELL

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Vol. 40

Springfield, Ohio, Saturday, November 4, 1916

No. 3

Wanted: T-Bone Steak

So Thirty-two Farm Families Form Their Own Market to Get It

By MARTHA EDMONDS

Life Commission discovdiscovered that bacon was the usual supperdish of the Midwestern farmer's wife, I wonder why it didn't tell them at once to have T-bone steak instead. That would seem to us to be the best solution of the whole matter. whole matter.

whole matter.
When we happened months afterward to think of this ourselves, and we were not appointed on any "life commission" either, we went confidently down to the meat market and called for two pounds of T-bone steak.

We felt, oh, so satisfied wth ourselves and everyone else. How easy it was to adjust the menu to suit our tastes, but when we asked the price of our steak and "65 cents" rang out in crisp businesslike tones, we felt ourselves slipping.

Then consternation was registered in all the homes when the housewives found out that T-bone steak was at a prohibitive price.

at a prohibitive price.

But when the men's club, of which the official name is the Wall Street Industrial Club, heard about it (and, believe me, they soon did) they knew some-

They knew already that the corn, hay, oats, bluegrass pasture, alfalfa, and finally the sleek fat cattle were produced right at their own doors. Why should they all sell and ship their good, tender meat to the large city cold-storage plants, then let the home butcher ship back any old canner and sell it to them

at fancy prices? So the men of our community (we live in Iowa) formed the Wall Street Beef Club. A president,

secretary, and treasurer were elected.

Stock in the beef club was divided into 20 full shares. In several cases two farmers with small

families went together, each getting a half-share of meat. This made in all thirty-two families which get good fresh beef every Friday morning.

Each shareholder furnishes during the summer one beef weighing from 650 to 750 pounds. Numbers were drawn from 1 to 20. Number 1 furnishes the first beef, and so on down to number 20.

Each farmer or group goes at five o'clock Friday

Each farmer or group goes at five o'clock Friday morning and gets his own meat. The butcher kills the beef the evening before, cuts up, divides, and weighs the meat out in shares and half-shares. Each family gets some of the good meat, and the butcher gets paid for the work by selling the hide and tallow.

The slaughter house was a real community affair. One man gave the ground for the building for being allowed to feed the offal to his hogs.

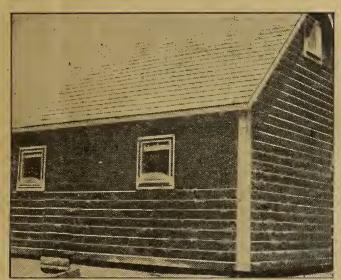
Strictly a Community Affair

THE building committee planned the house. The shareholders took turns in building, hauling the lumber and the various materials required. One farmer had a hired man who had formerly worked at the cement trade, so he put in the cement foundation and cement floor. A carpenter was hired for a few hours to square up the building, and with that excep-tion all the work, including painting, was done by the

The building is made of shiplap lumber, with shingle roof and cement foundation. It has six screened windows, two each on north and south sides of the house, with one each in the east and west gables, making good ventilation at all times to cool

A killing chute and pen on the outside of the building made of two-inch lumber prevent accidents, and a swinging door lets the stunned animal fall directly drains immediately out through a small door into a cement trough. A hoisting device operated by one man raises the beef afterwards.

The butcher takes great pains to keep his room clean and sanitary, and is justly proud of his equipment. The total cost of the building was \$122. This



One view of the slaughter house. The high window in each gable provides ventilation for cooling



This is the opposite end of building showing chute and killing pen. Total cost was \$122

includes lumber, cement, sand, hardware, block for cutting, and rope and pulley for hoisting. Each shareholder paid \$6.10.

Now the men are satisfied that they have solved one middleman's profit, and the women are entirely happy with their T-bone steaks.

Gasoline Singeing

By E: L. WOOD

OR killing hogs I use a small-bore rifle and shoot them in the center of the forehead. This avoids excitement and the hogs are not exhausted. Then I turn the animal quickly on its back



"The beef shown here," writes Mrs. Edmonds, "is one grown on our own farm'

and stick it directly in front of the breast bone, being careful not to injure the shoulder.

shoulder.

But instead of scalding in the usual manner I have tried a new wrinkle. Most men dislike the work of scalding a hog because of the steam and smell, and the new plan does away with this entirely. The method as reported to me was to take the dead hog to an open place free from litter or straw, and where there is nothing to catch on fire. Then pour a small quantity of gasoline over the carcass and touch a lighted match to it.

The plan sounded

Inghted match to it.

The plan sounded so good that I gave it a trial on two large hogs. No directions were given as to the best way of applying the gasoline or the quantity to use. I had been simply told that a farmer in another neighborhood used the method and it was successful. So I put my hogs in a safe place and used the gasoline very sparingly. Less than a pint covered the whole carcass except the part touching the ground

pint covered the whole carcass except the part touching the ground.

We later gave the head and parts of the feet a little more gasoline after the first application, and then turned the hog over and completed the small portion left. At the touch of a lighted match the carcass burst into flames and burned for perhaps two minutes. At the end of that time the hair was all gone. We then scraped with knives and scrapers, as with the scalding method, and were agreeably surprised with the outcome.

prised with the outcome.

The hair stumps and the outer skin which always comes off in a proper scald came likewise after singeing, leaving a nice white carcass. We then hoisted the hog and rubbed it down with a scrubbing brush, using a pail and a half of warm water. No smell or think of caseline or hurning hair or anything of the taint of gasoline or burning hair or anything of the sort was left and the cleaning was done in half the

With the second hog we made even better time. In using this method the chief precaution is to have the

using this method the chief precaution is to have the hog in a clear, open place away from buildings, and to bring no more gasoline near the carcass than the amount actually needed. Do not fire the carcass until it is entirely wet with the gasoline.

The feet, neck, and belly are the parts most difficult to clean. With my next hog I shall hang up the carcass, pour the gasoline on top and let it run down. After the body is cleansed and the entrails removed, I split the carcass, which permits it to cool more I split the carcass, which permits it to cool more thoroughly. I let the carcass become thoroughly cold so that the meat can be trimmed neatly, but it is not allowed to freeze.

Our Sausage Methods

THE ribs are taken out, shoulders, hams, jowls, and sides blocked and trimmed into shape. The trimmings are placed in clean boxes, later to be cut up and made into lard and sausage. There is nothing unusual about our method of curing hams and bacon, but I will briefly outline the plan for making sausage. We take the lean trimmings and add one pound of fat to five pounds of lean meat, and grind fine, then thoroughly mix in salt, sage, and cayenne or red pepper to suit taste.

If preferred, the entrails may be cleaned for cas-

ings. However, we use cotton cases from 12 to 14 inches long and of different widths. I prefer the sausage after it has been fried to be somewhat larger than a silver dollar. We pack the sausage in these cases, being careful to push the meat solidly down, as air spaces induce mold. These filled cases are hung up and smoked until the whole sack looks shriveled and cured

For summer use we sometimes fry and pack the sausage when fresh into stone jars and cover with hot lard. This I do not like to eat later than May. But when fried and put into tin cans and covered with its own hot grease and then sealed with paraffin, sausage will be as fresh in July as in December.

Staying on Desert Soil

Having No Market a Utah Settler Develops His Own

By W. L. HALL

Here is one of the big wheels used to pump water out of the Green River

OT how to get back to the soil, but how to stay on desert soil miles away from big towns and yet make a living—that was a problem confronting W. E. Brown at his little place on the Green River in Utah. He began the struggle about 1885, so it may be seen he has been at it for a good while

gle about 1885, so it may be seen he has been at it for a good while.

The desert is by no means as forbidding a place as most people imagine. To be sure, there are spots so devoid of vegetation and soil that even a jack rabbit would scorn to take up a claim there, but there are thousands of acres of bottom lands along the big rivers that will produce as fine crops as anyone would care to gather.

That is all well enough; it is satisfactory so far as solving the problem of immediate existence is concerned, but civilized man has a number of other wascerded, but civilized man has a number of other wascerded the mere necessities for eating, so the crop must be turned into money or whatever will buy the desired things that are produced in the outside world. People in the fair-

People in the fair-ly well settled East, ly well settled East, where millions of customers are waiting for all that the farms can produce, have comparatively no problem in reaching the market. What would they do if planted on a desert ranch at least 300 miles by rail from a city the size of Salt Lake, and about 700 miles from Denver? The problem of

The problem of staying on the soil under such conditions is one that demands plenty of brains as well as a great deal of hard work to get a ranch under way and keep under way and keep it going in a manner that will enable the owner to live as a modern man desires. Brown worked out

the problem easily at first, as you will observe.
Irrigation is absolutely necessary on such a place. There is an abundant water supply all the year round in the Green River. Pumping, you say, is all that is necessary. Remember, however, that pumping machinery costs money, that gasonie or other fuel is something that must be paid for. Then consider that most settlers in such places are not objudently supplied. most settlers in such places are not abundantly supplied with ready money and you have the situation

plied with ready money and you have the situation at the start.

The only thing to do is to make the water lift itself to the level of the fields. At low water the surface of the stream is 20 feet below the level of the fields. Necessity compels the installation of lifting appliances made at home from material that can be procured easily. So you will see along the Green River many irrigation water wheels. No claim is made that these originated in this section of the world, but it is known that they have done a wonderful amount of good for the ranchers.

These immense wheels resemble more the big paddle wheels of a steamboat than anything else. That at Brown's place is about 25 feet in diameter. It is strictly home-made. The piling was secured by felling big cottonwood trees, and the paddles from lumber hauled in. Many of the spokes of the big wheel are fashioned directly from trunks of trees. It is not a fancy-looking contrivance at all, but it does its work. Sections of galvanized iron pipe about six inches in diameter are fastened to the paddles. One end is sliced off diagonally for an outlet, and the other cut at a proper angle to fasten to the upper face of a paddle.

In this position as the wheel revolves driven by

In this position, as the wheel revolves, driven by the river current passing beneath, the mouth of the bucket is submerged first, and later the whole receptacle is under water. Then as the wheel still revolves the bucket mouth is elevated and the base depressed, so that it fills and is carried upward full of water. Near the top it begins to empty, the angle of inclina-tion assuring that the pour will be outward from the side of the wheel.

Along the side there is a trough into which the water falls, and from there it runs through flumes to the fields. Simple and effective, isn't it?

Found the Melons Would Keep

ALL went well with Brown when things were in shape. At Green River, the station established by the railroad, there was a big hotel. Also, it was a division point, and a great many men working for the railroad lived there. Of course that made a splendid market for all that could be produced on the ranch. Melons, grapes, potatoes, and garden truck of all sorts had ready sale. The problem seemed to be

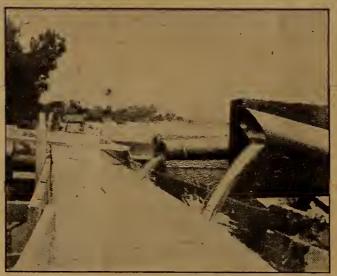
Things change, however. The division point was abolished. Dining cars were put on the trains and the big hotel was closed. People moved away and the ready market disappeared. This brought the supplemental problem of how to stay on the soil and raise things for a market that didn't exist. It was impossible to compete with the truck growers near Salt Lake and Denver. Railroad and express rates made that effort impracticable. Several of Brown's fellow ranchers gave up in disgust and moved away with

the railroaders. But the fascination of the desert had too strong a hold upon him. Even though hot winds blew across the wild wastes and the bare rocks in the distance appeared forbidding, he was not one to leave a locality that responded so generously to the efforts he made at gaining a living from the soil

to leave a locality that responded so generously to the efforts he made at gaining a living from the soil.

Like many others, he had some knowledge of the Department of Agriculture at Washington. He received samples of seed from time to time, and also studied the bulletins sent out. Along near 1900 he learned of a new variety of muskmelon that had been imported from Khiva, Russia. He asked for samples of the seed, and his request was granted along with those of several hundred others.

Brown planted the seed and watched the development of the plant and the melons. He was surprised to note the size attained. Full-grown melons were about a foot in length, some longer; they were double-conical in shape and resembled the contour of a hubbard squash, without the warts. In color they were



This shows how the iron buckets discharge the water, which is then carried away for irrigation

a dark, rich green. Two remarkable things were also revealed to him in the eating. One was that a slice from one of the Khiva melons was equal in quantity to a whole ordinary melon of the Rocky Ford variety, and the other was that the flavor was fully as fine as anything he ever had eaten. He had been informed by the Department that the melons would keep well, so he stored away a deven or so of them

so he stored away a dozen or so of them.

Along about Thanksgiving he tried one, and it was so good that he wrote to the Washington authorities about it. Along came a telegram requesting him to send to the Department some of the melons if he had any remaining. The shipment was made, and at Washington they had the novelty of muskmelons at Christmas time.

But Brown was most astonished when he received a letter telling him that of all those who had experimented with the new variety he was the only one who



Quite a pile of wood-isn't it?-to come from dead trees and old fence posts

had succeeded in raising a crop. He was asked to plant as many as he could, which he did; and the next year he sold \$600 worth of the seed to the Department. Maybe you have heard of these melons since. At any rate, Brown has kept right on cultivating them and selling the seed.

Brown's problem of staying on the soil was settled. He had the place to work, he had the product that could be marketed, and he could raise enough other farm produce on his place to furnish all the food he wanted. Moreover, he had secured a steady and reliable source of revenue.

Of course it must be understood that not everyone can do just as well. In his case he had the particular soil and climate necessary for the best growth of the melons. The adobe lands irrigated with water bearing a rich silt, a sandy soil, and plenty of the necessary water, all combined to make up his success.

Waste Wood Utilized

By A. L. ROAT

URING the fall of the year we look over the fruit trees that are dead or require pruning, and the cut pieces suitable for kindling and stovewood are stored in a convenient place. Old fence posts and rails that are of no further use are also piled up for the saw and ax.

During the winter days when a few hours' time can be

days when a few hours' time can be given to the woodpile, we saw the pieces into the proper length. The kindling wood is then stored in even rows under a shed where it will dry out and be accessible for future use.

Enough wood is sometimes collected and cut to last two years, and we use a quantity of kindling during the summer months in the "out kitchen." I find this method of caring for wood an efficient system and, besides, all pieces of lumber that cannot be used for construction are construction are made into kindling

sizes. If the wood is cut and stored, waste is thus prevented and odds and ends of lumber do not litter

A systematic method of piling and taking care of the wood is also a help to the busy housewife, and who is there that doesn't appreciate good dry wood near at hand?

Vertical Piling Makes Sawing Easy

FOR those who cut their winter wood with a circular saw, here is a method that saves time in handling and also makes the work easier. When you cart in the wood and pile it ready for the power saw, take the trouble to set each stick on end, building around and around the cepter. After the pile is once started it will stand alone and you can easily throw the wood in place without leaving the wagon. But work around all sides to keep the pile symmetrical and the pressure evenly divided.

You will take up less space with this method of piling, but the best thing about the method is found when you come to saw it. You can handle the sticks a lot faster and with less effort than when thrown haphazard or piled horizontally. There is no occasion for rolling the stick over or dragging it out of a jumbled pile, for by the vertical method you always have several sticks standing loose and ready to be gripped on the instant.

gripped on the instant.

This means efficiency and economy in both money and strength—quite noticeable in the course of a day's work. Of course, before building your stack or stacks of wood, you will want to plan exactly where your saw and engine must be set to permit the sawed wood to be thrown where you want it. Then build your stacks as convenient as possible to the saw table. When one has considerable sawing to do and an

engine of four horsepower or more, it will pay him to have his own saw. An automobile can readily be used for this purpose, and one large saw concern calls attention to this source of power which frequently stands idle while the owner bucks a woodpile. While a circular saw about 26 inches in diameter and complete with frame makes a good outfit for cutting up cordwood, you can, if preferred, buy just the saw and mandrel and make your own frame from material on hand.

Circular saws require about the same care as carpenter tools. To prevent rust, wipe off with-a clean cloth soaked in kerosene. File the saw as soon as it becomes dull, to save time and power as well as to prevent undue strain on the saw itself. When selecting a saw it is well to bear in mind that a high-grade product will cut frozen wood and stand hard usage without becoming dull much longer than a cheap saw.

It will also do about 25 per cent more work, making it the least expensive in the long run.

When the sawing is done in the woodlot or at different places in the neighborhood, time will be saved on short jobs by having a special engine-and-saw truck. This will save the work of finding a solid foundation on which to set the saw when it is moved.

EDITOR'S NOTE: The experiences of readers having unusual or original methods of wood-handling are invited. Address the Machinery Editor, FARM AND FIRESIDE, Spring-

Fancy Pork Products

Farm-Cured Meats That Bring the Greatest Revenue

By B. F. W. THORPE

N a number of farm homes I lately visited, the home curing of meat has become practically a lost art. On these farms little attempt was made to keep fresh meat in warm weather more than a day at a time. Lamb, pork, or veal killed for home use had to be served bountifully to prevent spoilage. But some of these homes showed a growing interest in the home curing of meat, also in the harvesting and storing of ice for refrigeration purposes.

To encourage such interest, officials in several States, notably Missouri and Minnesota, have lately endeavored to put meat-curing on an attractive basis. Missouri has held shows of farm-cured meats where prizes of \$100 or more were divided among each of the distinct classes of meats, such as ham, bacon, and sausage.

meats, such as ham, bacon, and sausage.

Before this new interest developed, packers were taking advantage of the farm demand for cured meat, and used as a sales stimulus the expression, "Make your mail man your meat man." Some farmers who are now home curing some of their pork have adopted the same phrase to win city trade. The mails work both ways.

both ways.

Largely from such efforts certain Missouri farmers are now making more profit from a few litters of hogs sold as farm-cured pork products than they formerly realized from double the number of hogs sold alive to dealers or shipped to distant markets.

But as with other lines there is a

markets.

But as with other lines, there is a know-how to the work. There is more to do than simply raise the right type of meat animal and have it in a well-finished condition for slaughter. The animal must be fasted, kept quiet and comfortable for about thirty-six hours before butchering, and receive nothing but fresh water during the fast.

ing the fast.

When an animal's digestive system contains feed at the time of killing, fermentation goes on rapidly, the flavor of the meat suffers, and its keeping qualities are lowered. The meat of an animal not fasted, and killed when overheated or excited, may become unfit to eat in a few hours after killing. When the weather is sultry the danger is greatest. Cool weather is best, though in warm weather satisfactory results are secured by butchering at night.

ering at night.

To allow the animal heat to escape as soon as possible, divide the carcass by cutting it down the back. On no account ever cut up meat until all animal heat has ascaned

Preparing meat for curing is an important process. Unless the pieces are trimmed so there are no ragged portions, much waste will result. The small ragged parts will be overcured and worthless for consumption. Furthermore, unless the carcass is properly cut, some of the more valuable parts will be sold too cheaply along with the less valuable portions.

How the Carcass is Divided

PORK carcasses are usually divided into four parts—head, shoulders, middle, hams. The head is severed by unjointing at the atlas joint with a knife, making the cut about an inch back of the ears. knife, making the cut about an inch back of the ears. The head is used for sausage and head cheese, the shoulders are separated from the middle portion by cutting between the fourth and fifth ribs, counting from the front, and the hams are separated from the middle by cutting just back of the rise on the backbone, cutting towards the root of the tail.

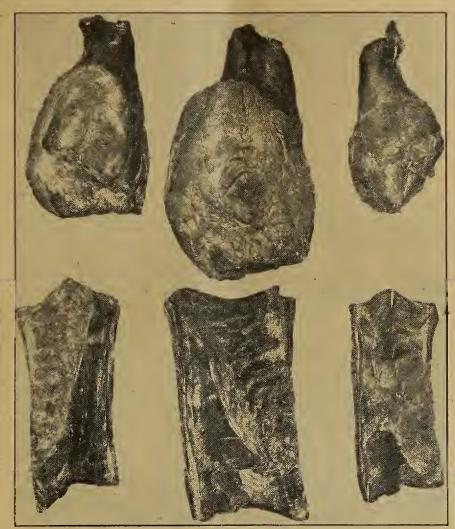
The middle contains the bellies or bacon strips, loin meat, short ribs, and side meat. The upper portion of the shoulder, known as the shoulder butt, contains the spare ribs and meat well adapted for steak

tains the spare ribs and meat well adapted for steak or roasts when fresh.

A standard curing recipe for either pickling or

dry-curing is eight pounds of pure salt, two pounds of brown sugar, and two ounces saltpeter for each 100 pounds of meat. When used for pickling, the salt, sugar, and saltpeter are dissolved in four gallons of boiling water; the brine when cold is used to cover the meat which has been packed in clean barrels, casks, or crocks.

Bacon strips will pickle in from three to six weeks. Hams and shoulders require from four to seven



Hams are medium "Regular," heavy "Short Cut," and "Picnic" types. Bacon strips are "Breakfast," "English," and "Sweet Pickle"

weeks, according to size and thickness. The meat must be kept constantly under the brine by weight-

must be kept constantly under the brine by weighting it.

The dry-curing process requires the same salt, sugar, and saltpeter preservative, but the meat is first rubbed daily with the salt preparation and then two or three times a week for about the same length of time that meat is kept in pickle. Between rubbings the meat is kept in tight boxes, and covered with the salt preparation.

with the salt preparation.

Smoking is just as important as the curing process if a perfect farm-cured product is to result. After the pickling or dry-curing is completed, hams and shoulders are rinsed off, and if the curing has continued for a month or longer the pieces will be improved by soaking in cold water overnight before hanging up to be smoked.

My preference in smokehouses is for one made of

My preference in smokehouses is for one made of either brick or cement. Have it tight enough to exclude flies and insects. Such a house will keep smoked meat in good condition until wanted. But for temporary use, dry-goods boxes, hogsheads, or even barrels will do, provided the smoke is introduced from outside. Where fire is to be placed under the meat, the height of the smokehouse should be 8 or 10 feet, so

that a moderate uniform heat can be kept during the period of two or three weeks while smoking is being done. Much good meat is spoiled by oversmoking and

Thin sides of bacon must be smoked less than ham. And more care and skill are required to smoke bacon successfully than hams and shoulders.

And more care and skill are required to smoke bacon successfully than hams and shoulders.

Sound hardwood, such as hickory, maple, apple wood, juniper, sassafras, or similar woods giving a desirable smoke flavor, is preferred for smoking the meat. If possible, use sawdust of the same material for smothering the fire. Soft resinous woods will injure the flavor. Clean corncobs are a fair substitute for hardwood if the fire is carefully tended.

Where smoked meat is to be kept long without the aid of a brick or cement smokehouse, first let the meat surface dry, then wrap each piece in heavy paper and enclose in heavy canvas covers sewed securely around the meat. Paint each canvas cover, after sewing, with a preparation composed of three pounds of barium sulphate, one ounce of dry glue, one and one-third ounces of chrome-yellow, and five and one-half ounces of flour. This amount will paint the covers for 100 pounds of ham or bacon.

To prepare the paint, first mix the flour thoroughly in six quarts of water, dissolve the chrome-yellow in a quart of water in a separate vessel, and add this solution and glue to the flour; bring the whole to a boil, and add the barium sulphate, stirring constantly. Make the paint the day before you need it.

Personally, I believe in curing meat so it will appeal to the trade for which it is intended. This is accomplished by slight differences in the recipes for curing previous to smoking, but the standard pre-

differences in the recipes for curing previous to smoking, but the standard preservatives are always salt, sugar or molasses, and saltpeter. Other ingredients, such as borax, soda, and pepper, are sometimes added to the pickle or dryguring propagation to give special flavors. curing preparation to give special flavors and to discourage the attack of insects.

Everything Under Control

WE HAVE formed the habit, also, of attaching undue importance to certain methods and recipes which have come down from our ancestors. Some of these, it is true, cannot easily be improved upon. But with fine meat becoming more and more a luxury there should be no haphazard methods used in killing and curing. The process is simple, and there is a scientific reason for every step all the way from the fatted animal to the frying pan.

Just because a hog is butchered on a farm makes the meat no better than if the animal were killed anywhere else, and if careless methods of handling are practiced the meat may actually be of inferior quality.

ticed the meat may actually be of inferior quality.

This side of the matter was once put to me by a man whose observations were wide and whose palate was particular.

"If I must constantly eat the quality of meat found on the tables of some of my neighbors," he said, "then I prefer to buy meat for home use from the packers." He went on to describe oversalting, strong flavors, and other qualities he had noticed but which the people who used the meat had become accustomed to, and who apparently consider their products of good quality. "How can anyone hope to satisfy customers with that class of meat?" he asked in conclusion.

His remarks no doubt had a good foundation, and the remedy lies in a study of market demands.

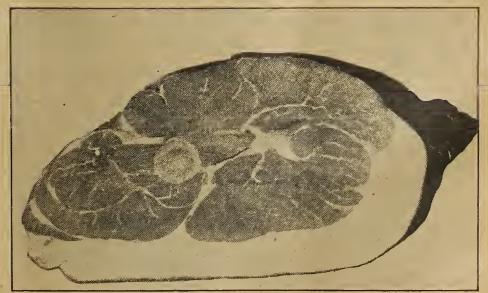
the remedy lies in a study of market demands.

But on the whole, farm-cured meats have a reputation for good quality, and they can easily retain the reputation. All conditions are under perfect control from the feeding of the animal up to the sale of the meat. I have heard city residents who are considered comfortably situated remark on the opportunity farmers have to supply their tables with choice home-raised meat. Such an expression is merely another way of admitting that first-class meats are becoming harder and harder to secure, and that they are hungering for a product that farm families can easily produce both for home use and markets.

EDITOR'S NOTE: For additional meat-curing information or recipes to impart special flavors, address Live-Stock Editor, FARM AND FIRESIDE, Springfield, Ohio. Your questions will be answered by personal letter.



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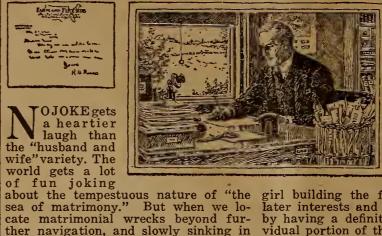
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The Editor's Letter

A Money Famine That Wrecks a Farm Home





the family, the business interests of that farm are

I have seen many a twelve-year-old boy and girl building the foundations of their later interests and success in farm life by having a definite part and an individual portion of the profits as a result of their help in the farm work. How clearly I remember when as a lad in my teens I drove a two-year-old colt of my own raising and training to the county fair, where I won the first premium in its class; and later in the day when I sold the colt for \$200, my first big lump sum of money. It was hard to part with the colt. That business transaction put farming on a different and more interesting plane.

The business of a city man or the work of those employed in shops or factories can succeed or fail largely as a result of the skill and faithfulness or the lack of these qualities in the indilater interests and success in farm life

place.
Quite frequently I get signals from vessels that are in trouble on this matrimonial sea. One just received comes from a wife and mother. I am sorry to admit that her case is by no means the only one of its kind that has come to my attention in my mail of late.

The letter unmistakably shows that this woman, the mother of several children, is an intelligent, well-educated woman. She writes to learn if from a legal point of view she can hope for any relief from the humiliating and disheartening stinginess of her husband, which she has suffered for years. A portion of her letter will best explain her situation: the lack of these qualities in the indi-vidual worker. But a farm is a complex industry where the combined ideas of the family often will stimulate team work and advance all along the line.

HOW naturally and contentedly we continue to remain in a rut! This fact was convincingly brought home to me last July when making a succession of stops in the noted fruit belt bordering Lake Erie. As train, trolley, and automobile sped through this well-kept fruit district, beautiful cherry trees, on every hand, were well loaded with the gleaming fruit, ready for harvest. Raspberries, red and black, also furnished their quota of attractiveness to the eye, and whetted the appetite with their persuasive aroma as well. As a result, the travelers about me soon hungered for these fruits, whose freshness and cooling acids were just the qualities needed to counteract the extreme heat from which the travelers were suffering.

from which the travelers were suffering.

There were heard quite frequent comments on the treats in store at hotels and road houses, where business stops were to be made, and, as a matter of course, these ripe, luscious fruits would be plentiful. Did we realize our expectations? No! My experience was no doubt the same as hundreds of others passing that way during cherry and berry harvest period. A dozen meals in as many hotels, restaurants, on diners,

berry harvest period. A dozen meals in as many hotels, restaurants, on diners, and at farmers' houses failed to bring to my plate a single helping of fresh, ripe cherries or raspberries.

To make the case more incomprehensible, I was repeatedly told by growers of cherries and raspberries, during my trip, that it was hardly worth while to gather their cherries, as the returns for the shipment scarcely paid for the labor, transportation, and selling charges. These growers were entirely neglecting their very best local consumption market. All of the local hotels, road houses, and dining cars passing through this fruit region should have proved profitable outlets for a limited amount of these fruits, to be eaten fresh, were the trade systematieaten fresh, were the trade systemati-cally and persistently developed in just the right way. Invariably, stale stor-age fruits out of season were set before travelers—oranges, grapefruit, pine-apples, foreign-grown cantaloupes, and watermelons, right in the heart of a famous cherry and berry growing cen-

On the same trip, one stop for dinner was at a Lake Erie shore resort. Did they offer stale clams, crabs, or sea fish from the seacoast? No; these shore resorters know wat the travelers want. Their strong card is fresh fish for the diner, with the fish one minute in its native element, the next browned to a turn on a diner's plate. This shore resort meal again clinched this thought in my mind: the real science of successful marketing is to develop one's home market to the greatest possible point, and to supply the near-by consumers with the highest quality products, most invitingly displayed and delivered perfectly fresh, before foreign markets are utilized.

her situation:

"I dislike to bring our private affairs to the attention of a stranger—even to our own Editor of FARM AND FIRESIDE, whose counsel so often is asked by readers in regard to farm and home matters. But I can't continue to go on ers in regard to farm and home matters. But I can't continue to go on much longer as matters now are and have been for years. I want to learn if from a legal standpoint I can hope for any relief from being kept absolutely without money to spend for any purpose. The income from our farm is not large, but the farm is well handled, for Husband is a skillful and industrious farmer. We keep a large number of chickens, which I care for, also the butter work is practically all in my hands; yet, whenever eggs, poultry, or butter are disposed of, Husband insists on marketing it himself. He then buys all the household supplies, including all clothing for the children and myself, without even inquiring as to our preferences. All money remaining is immediately banked in his name, subject to withdrawal only by himself.

"This financial policy has been in operation for half a dozen years or more. In fact, ever since he decided that the only way to get ahead to best advantage is by having the business of the farm centered in himself. Persons not knowing my husband might say I should demand my rights. But if they had lived with him a dozen years they wouldn't say it. He is a stone wall."

The foregoing is only a portion of this mother's letter, but I think it tells the complete story of what many wives are compelled to undergo.

Mark you, the entire letter of this wife and mother is candid and reasonable, and merely voices the idea that no woman and her children can keep their self-respect when they are penniless all the time, and can be average between they are penniless all the time, and can be average between the latter.

ther navigation, and slowly sinking in the grasp of the undercurrent, jokes and laughter seem strangely out of

self-respect when they are penniless all the time, and cannot even select their own clothes. Of course, between the lines her letter shows the pain and hunatural life engenders. She doesn't seem like the kind of a woman who could not be trusted to buy suitable clothes for herself and the children, and I don't believe from reading her letter that her husband is justified in his highhanded system of money control.

JUST what would be the wisest course for this woman to pursue is hard to say. Thank God, such a degree of say. Thank God, such a degree of "standpat" domineering stinginess is the exception and not the rule. But it won't exception and not the rule. But it won't do any harm to ask just how many husbands reading this letter can conscientiously "cast the first stone" at this woman's husband? Is the financial system on which we are operating our families and our farms founded on a just and equitable basis? We can't expect the satisfaction and good feeling which make for family co-operation and business success unless the whole family—children, wife, and husband—have a real share in the profits as well as in the work of the farm. The farmer's wife is the farmer's partner in more senses than one, and as a rule she is a mighty smart partner. Wherever there has not been a suitable business system worked out to include all members of

The Editor

Home-Canned Meats

Put Them up in Winter and Get Double Use of the Jars

By GRACE DIETZ



The retort on the floor has been set off the stove to cool

VERY day we more keenly note the necessity of trying to produce the family living on the farm. This necessity has been demonstrated by the continual advance in prices of foodstuffs. And we are also seeing more plainly that we must adopt modern methods and work out systematic rules in order to carry out successfully any calling in

which we may be found.

Hence the solution of keeping the family larder well supplied is in regulation, or, in other words, preserving at seasonable times of the year a sufficient supply of meats, vegetables, and fruits to last till they are again plentiful.

Of course the factory system has removed from the

they are again plentiful.

Of course the factory system has removed from the farm forever the production of many necessities (I am making no complaint of factory production of a long list of articles), and for a time it seemed that the canning factories had deprived the farmer of the privilege of producing his own living.

But a timely investigation under the auspices of the U. S. Department of Agriculture has tended to make a great change, and the farmer is looked to and expected to produce almost his entire living, with the exception of sugar—and why not? His facilities for production are unlimited. This pertains to production of meats as well as any other product.

of meats as well as any other product.

One serious condition which the farmer endured for many years was in trying to maintain or establish means of keeping on hand the family supply of meats. Many methods were tried, which invariably resulted in loss and waste. In disgust through his many failures the farmer turned to his local market as the source of his meat supply.

Kitchen Stove Supplies the Heat

BUT owing to the wide difference in prices between what he was receiving for his stock on foot and the price paid over the block, Mr. Farmer decided to adopt independent means, and now on many farms the business of canning up a year's supply of meats is

a common practice.

"Canning?" you ask. Yes, canning. The spread of knowledge about canning and the introduction of the steam-pressure canner have made it easier than ever before to prepare and preserve a good supply of home-canned meats, as well as fruits and vegetables, to run the family the entire year.

One important feature in meat-canning is that it can be done in winter when there is no need of hurry.

Meat also keeps best then, although I have canned lots of meat canned lots of meat during the summer, experiencing no loss, due to the fact that I always had plenty of ice and had the meat thoroughly and properly cooled be-fore canning. Then, too, in can-ning meats during the winter the class

the winter the glass jars which contained the fruits and vegetables are empty and can be filled up with meats. Thus you obtain double use from your jars.

Insterilizingmeats I process them in the glass jars, using a steam - pressure retort, in which I generate steam by setting the retort on the kitchen stove. I much prefer to process meats at a tempera-ture of 250 degrees Fahrenheit for a period of one hour than

I have used a number of canners, but consider the one that I am using and have used for a number of years the most economical and serviceable for the average home use, especially where one expects to can meats and starchy vegetables which are difficult to handle at a low temperature.

My conner measures 12x18 inches and will generate

degrees, which is 30 pounds pressure per square inch. But 15 pounds pressure and 250 degrees for a period of one hour is sufficient for all meats, except meats containing bones. These we process at a temperature of 260 degrees. This canner cost me \$15 and freight, which I considered a small cost when I saw how much I was able to save with it.

Now, as such a difference of opinion is entertained regarding how long meats should be kept before being cooked or canned, I will say that I have canned pork, cooled on ice in summer, the same day it was butchered, up to five days old in winter. I have canned beef that had been butchered all the way from two days to two weeks. But I do not like to handle meats that have been butchered so long, on account of the

scum which rises in the remove any such scum, but this trouble is eliminated by handling meats that have been butchered a shorter time.

Charles D. Woods, vice director of the Storrs (Connecticut) Experiment Station, says: "After slaughtering, meats undergo marked changes in texture. These changes can be grouped under three classes or stages.

In hot - climates all

In canning beef it matters not whether we are working with one quarter or a whole beef. We joint it and cut it up in suitable-sized pieces. The best pieces we put into baking pans, add one inch of

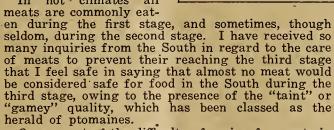
to process the same pack at a temperature of 240 degrees for a period of one and one-half hours. I consider it impractical to process or sterilize meats at any lower temperature than those given above. Hence you will understand my preference for a retort which will generate as high a pressure per square inch as will be required for sterilizing or processing any product which is difficult to sterilize at a lower temperature. at a lower temperature.

My canner measures 12x18 inches and will generate temperature of 212 degrees Fahrenheit up to 274

kettles or pans while we are preparing the meats for the jars. Of course I am always careful to

In the first stage, when the meat is just slaugh-tered, the flesh is soft, juicy, and quite tender. "In the next stage the

flesh stiffens, and the meat becomes hard and tough. This condition is known as rigor mortis, and continues until the third stage, when the first changes of decomposition set in."



On account of the difficulty of caring for meats in large quantities in the South, I have learned that poultry and fish form a great part in meat dishes.



Miss Dietz is here placing jars in the retort preparatory to sterilizing them

water and roast for twenty-five minutes, turn the pieces, and roast twenty-five minutes more.

Remove from pans to slice for packing. While we are slicing we sprinkle salt, to taste, over the slices.

The flank and bones we boil. This meat we cut up rather finely, salting to taste. Use pure salt. In packing the sliced roast meat into the jars, I use some broth off of the bones which I have boiled. After the jars are packed, place rubber and can convinc it. jars are packed, place rubber and cap, screwing it tight, and backing it one-fourth inch, and put jars in retort, which should contain 1½ inches of water.

Process jars one hour at 15 pounds pressure. Allow pressure to go down, take out jars, and make final

After chopping the boiled meat, add broth and salt, and heat on stove. This makes the liquid clearer. Then fill jars, place rubbers and caps, and proceed the same as above.

Our object in partially roasting the meat before packing is that it is shrunken in the oven, the blood is drawn out, it slices more easily, and is nicer to handle than if it were packed raw. Then, too, if canning for sale we like to get just as much as possible into the jars.

Tastes Just Like Fresh Meat

IN CARING for pork, after jointing it, we skin the fat off the shoulders and hams, roast them, and proceed the same as with the beef.

We make chopped pork by using boiled backbones

and ribs. In this case, on account of the bones, we process the jars one hour at 260 degrees. We pour over the ribs in the jar the brown liquid obtained by soaking the pan (to loosen brown substance) in which the ribs were roasted.

In canning sausage, we pack the raw sausage into the jars, place rubbers and caps, put into retort, process one hour at 250 degrees, allow pressure to

go down, remove jars, and seal.

All of these meats are wholesome and delicious, having a rich fresh taste which cannot be said of meats that are sterilized at a low temperature, and in many cases spoil in a short time. It is very common

for us to have jars of meats and vegetables which have been canned a year or more.

After you become familiar with the work you will be surprised how quickly you can fill a big cupboard with nicely canned meat. As the first picture indicates, I have two of the pressure outfits so that one can be on the stove while the other is being emptied and made ready for the next lot of cans.

In addition to farm-killed meats, I have also canned considerable quantities of fish with perfect success. While perfect success. While the process I have de-scribed is chiefly to give an idea of what can be done with meats in the home, one may also develop a nice business canning meat for neighbors who have no outfits of their own. For one family we canned two hogs, and for another

Some of our neighbors also can their old hens after the laying season is over, rather than sell them at the low prices the market offers.

Sells Dressed Beef

By MRS. M. KENNEDY

HALL we kill that beef and keep some of it ourselves or sell it alive to the butcher for what we can get?" is a question that troubles many a farmer who has only a few animals to dispose of in the course of a year. Usually the unfamiliar and disagreeable task of killing and dressing, accompanied by the fear of getting less for the meat than the animal would bring alive, gives the butcher a chance to make several dollars and deprives the farmer's family of some very nice meat.

some very nice meat.

Perhaps our experience may help someone else to answer this question in a more satisfactory manner. There stood in our barn a short time ago a very fine corn-fed steer for which my husband asked \$50. Several butchers looked the animal over, and one of them offered \$40 for it. Another said he would give five cents a pound for it alive, but unfortunately we have no stock scales, and so refused to sell without knowing definitely how much we would get.

Finally we decided to butcher the animal ourselves and sell the meat as best we could.

ourselves and sell the meat as best we could. The two front quarters, weighing 281 pounds, sold at eight cents a pound, and brought us \$22.48. One hind quarter, weighorought us \$22.48. One find quarter, weighing 124 pounds, sold at nine and one-half cents a pound, and brought \$11.78. The hide weighed 84 pounds, which, at 14 cents a pound, brought \$11.76. The total received for all parts sold was therefore \$46.02, or \$6.02 more than we had been offered for the original climater. animal alive.

And remember that we still had left the other hind quarter, weighing 124 pounds, also the heart, tongue, and liver, and we made about two gallons of tallow. There is one family at least that will not go without beef in the future.



Fastening cover on retort. This makes the outfit steam-tight. The gauge registers the steam pressure, which is kept at from 15 to 20 pounds for canning most meats

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November 4, 1916

Appropriations for 1917

BY THE Agricultural Appropriation Act for 1917 Congress voted the Department of Agriculture \$24,948,852 to continue and increase its work. Other acts bring the total budget available for agricultural purposes to over \$36,000,-000. This figure does not include any of the \$70,000,000 provided by the Federal Aid Road Act for road-building during the next nine years.

Included in the \$36,000,000 odd dollars is a million and a quarter set aside for the eradication of foot-and-mouth disease and other epidemics which may threaten the farms of the country, but it is an emergency fund and will not be used unless there is an outbreak.

Other important provisions and new legislation contained in the Agricultural Appropriation Act are:

Appropriation of \$65,000 for market news service for live stock, meats, and animal products.

Co-operative employment of marketing agents in the various States.

Appropriation of \$136,600 for market news service for fruits and vegetables.

Appropriation of \$175,000 for experiments and demonstrations of the best methods of obtaining potash from kelp.

ing experiments in producing dyes from material grown or produced in the United States.

law which permits the exclusion of seed dried, then shipped to the American which contains an excess of dead seed, trade via the Pacific Coast in "scramdirt, or other adulterants.

Appropriation of \$10,000 for the development of a sugar-beet seed industry. The remainder of the appropriation is allotted to the various bureaus and branches of the Department.

Should Let Public Know

to consider methods of getting a living and examine 3,000 eggs apiece daily, price for milk. It had become a gues- and receive \$5 a month for their work. tion whether dairymen should get more all through.

appeared and asked admission. There day without this first aid to the hungry. was some discussion, following which a motion to admit the press was voted down. It was agreed to have a publicity committee give out such statement of THIS is the way the steel situation proceedings as it saw fit.

the case that developed from the discussion was this:

milk. It cost them an average of over 2 cents a gallon to ship. That left an average of just about 17 cents a gallon, the year through, for the producerconsiderably less than half what the consumer paid. Was it enough?

The farmers all knew it was not, but when a proposal was made to have a committee study in detail the costs of production, and have them published, there was a chorus of opposition. "We know we're losing money; what difference whether anybody else knows?" was the substance of the objection.

That was no reason at all. A closeddoor convention, refusing to let the public know anything except that it was talking seriously of shutting off the town's milk supply on a given date unless it got an arbitrary increase of price, would have forfeited all claim to public sympathy. A good majority of those present favored that proceeding, which would have been ruinous. The calmer counsels of a few finally prevailed, and it was determined to make a complete public exposition of the facts, with statistics on cost of production, distribution, etc., and to appeal for public support.

That convention started its movemilk producer must make the public understand that he is really its friend. There is very real danger of milk famines all over the country in the coming year, and the one thing that will keep dairymen producing milk is to pay them a living price for it. With hogs around \$11, and butter at present prices, there are temptations away from the 10-gal-

Chinese Eggs

VER since the hens of John China-L man began laying eggs for the American breakfast table, everything except "near-by hennery" or special "nest-to-table" brands have been open to suspicion. Now Yankee business thrift is undertaking to have the Chinese hen compete for American honors in the Appropriation of \$50,000 for conduct- 'field of "processed" eggs. A Boston concern has recently completed an egg-preserving plant in Shanghai, China, which has started in to handle 300,000 eggs Amendment of the seed-importation daily. The eggs are either frozen or bled" form. These eggs enter into competition with American eggs for bakery and confectionary use. These Chinese eggs are bought for about one-half cent each, and are processed by American machinery "manned" by about 200 Chinese employees one half of whom are

Chinese men candle about 16,000 eggs CONVENTION of milk producers apiece a day by using electric-light A tributary to a large city was held candling outfits. Chinese girls can break

The lesson in this for American poulfor milk or quit producing it. The trymen is to let the foreigner have the dealers in the city had been invited to bakery and confectionary egg trade, and a conference on the subject, and just use every ounce of energy in developing two out of some scores of them had ap- the American taste for the strictly fresh peared. The milk producers were mad fancy flavor of near-by laid eggs. The person who becomes a breakfast-egg Right at the outset a newspaper man epicure doesn't know how to begin his

The Steel Outlook

L looks: In spite of a supply of ore That convention made a mistake from Lake Superior points nearly douright at the outset. If those milk pro- ble that of a year ago, the steel mills of ducers didn't have a case that could the country now have unfilled orders stand publicity, they didn't deserve a amounting to about ten million tons. better price. They did have such a And even should all Europe lay down case, and should have invited the press arms to-morrow, there would be little and anybody else interested. In brief, relief in sight. The replacement of bridges, railroads, and buildings will create a demand for steel that is ex-

gone up; everything, that is, except chromium, and manganese, which are used in high-grade alloys, have advanced over 500 per cent in some cases.

> Retail prices on farm machinery, metal roofing, fencing, and building hardware have increased, but not to the extent predicted. Fearing a public protest over increased prices to the consumer, manufacturers have attempted to make their stocks of raw metal last until the iron market declined. But with the steel mills dictating higher and higher prices in apparent indifference to new orders, we must brace ourselves for an advance in retail prices and take comfort in the continued good markets of farm products.

> Disk harrows and disk drills are expected to show a very large advance since disk blades have increased enormously. Persons contemplating the purchase of wire fencing are likely to save anywhere from 10 to 40 per cent by buying before spring. It is also a good time to stock up with building hardware, plow points, repair parts, iron piping, and tools of all kinds.

These suggestions are not made from any impulse of the moment, but only after close questioning in many branches of steel-using industries. The feeling that higher prices must appear in a few ment in the right way, anyhow. The months is unanimous, also there is keen regret that the advance is necessary.

Fencing Out the Dog

URING the past season there has been an experiment carried out on one of the farms belonging to the Pennsylvania College of Agriculture intended to demonstrate whether sheep can be safely kept by fencing them in a dog-proof enclosure every night. The dog-proof fence enclosing one acre, and with the open shed suitable for protecting 100 sheep from storms, cost \$125.

The fence was constructed of woven wire five feet high. Just below the woven wire, close to the ground, a barbed wire was stapled, and two barbed wires above the woven wirethe first four inches above the woven wire, and the second eight inches above the first barbed wire. Thus a fence about 61/2 feet high was provided.

The plan of dividing the corral into equal parts and alternating the sheep on each portion every ten days was found to give the best satisfaction.

This plan, of course, safeguards the sheep during the night, but where the pastures are rough and broken and far from the home buildings, it has often been found that sheep suffer seriously from dog damage in the daytime.

Our Letter Box

Suggestions for Betty

DEAR EDITOR: Please tell Betty, the June Bride, to keep right on ordering her dresses from the catalogue houses. It costs more, of course, than to make them herself. But think of the time saved in which she can "bend her ener-gies to making money" (for instance, filling orders for marmalade, with sugar out of sight) "instead of trying, in such an inefficient way, to save a few pen-

Meanwhile, we who have kept in practice with the needle will continue to make our pin-money by taking up, letting down, taking in and letting out, and otherwise remodeling the cataloguehouse dress. Take it from one who has had experience. CLARA OWENS, Iowa.

Speaks for the Husband

DEAR EDITOR: I have the temerity to submit the following: A zealous press agent in FARM AND FIRESIDE for Sep-A zealous press tember 16th, writing under the title "Willing to Cater," has this to say about "a neighbor of mine who claims she makes more from her produce in a year than her husband does from his farming operations."

assurance is repeated that the revenue derived came from the produce woman raises and markets—practically

In other words, the burden of the ragtime time song applies here—"Everybody works but my old man." He, poor man, handles the herd and supplies the "bal-anced ration," which ought to cut something of a figure when the cream separator turns out its product. But it doesn't. Why? Because this is the twentieth century, and woman has the

right of way.

It doesn't cost this "neighbor of mine" anything to raise chickens, for they just feed on the old man. Her turkeys go to market in "prime condition." A turkey will eat nearly as much corn as a horse, and that too ought to count for some-thing on the husband's side of the M. H. JENSON, Kansas. ledger.

The Same Story

DEAR EDITOR: Being a reader of FARM AND FIRESIDE, I am interested in your Editor's Letter in the issue of July 1st, entitled "So a Young Man Can Get a Farm of His Own." I am also a man just past the fifty-year mark. I came to Nebraska in '79 with my father. Have seen the country develop so that land in Merrick County which at that time could be had for the asking is now worth from \$65 to \$200 an acre. In '79 the same question was being asked by our young men as it is to-day: "Where

shall we go?"
Now, let me suggest that this question has been answered and is being answered every year by our best young men, those who have the intelligence and the ambition to take hold of the opportunities that Nature has laid before them. Being a resident of western Nebraska, and having invested in land here only a few years ago, I have seen land which at that time could be bought for at from \$3 to \$10 an acre advance to \$15 to \$40. This land will produce good crops. Now such land must ulti-mately reach its real value the same as all other land has always done.

George Rose, Nebraska.

Oklahoma Optimism

DEAR EDITOR: I've been thinking for some time I would write a few lines to your paper in appreciation of the many ideas I have secured from it on raising cattle, hogs, sheep, and poultry.
The dry weather damaged cotton to a

great extent here in Oklahoma, the corn crop is light, and other feeds suffered too. But recent rains have helped get the ground in good shape for wheat-sowing, and cotton is bringing from 14 to 16 cents. D. W. SMITH, Oklahoma.

Prefers Eight-Pig Litters

DEAR EDITOR: The pig that is farrowed and not raised is no profit to I note in looking over a number of litter records that quite a number of the very large litters farrowed are lost down to from seven to eight pigs. I once owned a sow that never farrowed more than ten pigs at a time, and another that usually farrowed from eleven to thirteen at a litter. These sows were owned at the same time and a record kept of their pigs. An average of the pigs raised showed that the sow that never farrowed large litters only lost one pig while she was kept, and the average of pigs raised showed up as well as the other one. Some sows seem to be naturally careless with their pigs and kill many of them.

I prefer the sow that farrows medium-sized litters, and raises them, to the one that farrows very large litters. From seven to eight pigs are as many as one sow can raise. She cannot eat and digest enough to provide milk for more than that number-without danger of injuring her own constitution.
A. J. Legg, West Virginia.

To Keep Girls at Home

DEAR EDITOR: I am an appreciative reader of your paper, and seeing a letter in the July 15th issue from Frances Albro of Oklahoma, asking for articles about keeping the girl on the farm, I decided to write a little on the subject.

I am a girl of seventeen, but a thoroughbred farmer. I have lived in town about two years, but the experience, though I was small at the time, has only helped to tie the golden cords of country life cheat was heart

life about my heart. We girls want amusement as well as the boys. Give us good literature to read—books to help us understand the

beautiful lessons nature teaches. Let us enjoy the company of the nice young cents a gallon in summer (five months) and twenty-two cents in winter, for milk that the consumer paid 9 cents a quart for the entire year. The cost of stock, land, feed, labor, everything, had per cent. Rare metals such as tungsten, and average of 15 pected to last for years. Wholesale this pected to last for years. Wholesale as the pected to last for years. Wholesale and twenty-two cents in winter, for have within the last year advanced 116 the sum total of sales for these amount ed in 1915 to \$796. We are told that "most of this produce she raises herself," and that "there is nothing spectors and girls. Harrier Harrison, N. C. people of our community. Don't make





Why You Can't Buy Goodyear Tires From Mail Order Houses

A study of old tires gathered in junk yards shows that many of them wear out before their time because they have not been used properly.

So a manufacturer of tires has not done his duty to the public until he provides a way for all tire users to get the constant advice and help of tire experts.

You may think your car is running just right and that your tires are doing all that they should do. But an expert, in five minutes, may show you how to get three times the mileage you are now getting.

That is why Goodyear Tires are sold through Goodyear Service Stations—and not through mail order houses or direct from factory—so that all Goodyear

users may be able to get the last mile of wear out of their tires.

There is a Goodyear Service Station man in your neighborhood. He will sell you tires worth the money. Then he will help you get your money's worth by advice, inspection and inflation service.

This is the only right way to sell tires—or buy tires.

Good Tubes Make Casings Wear Longer

When the Goodyear Service Station man suggests that you put Goodyear Tubes in your Goodyear casings he is thinking as much about making your casings wear a long time as about selling tubes.

He will especially recommend Goodyear Heavy Tourist Tubes because they are cheapest in the end.

All Goodyear Tubes are made the right way. They are built up of layer on layer of pure, tissue-thin gum, not ground out of a machine like sausage.

Each layer is inspected for sand holes and bubbles. Then a valve patch is put on and the whole is vulcanized into one unified, air-tight tube, which will do all the work required of a tube and do it longer and better than others not made in this careful, expensive way.

You'll Be Glad You Got This Repair Kit

All of the quick-repair tire necessities have been collected into one handy package in the Goodyear Tire-Saver Kit.

This is the only thing of its kind on the market and is worth many times its price—in peace of mind alone.

When you start out with the Kit in your tool box you know that you are going to get back home, whether you are carrying spare tires or not.

Whatever accident your tires may have—short of complete ruin—is provided for in the Goodyear Tire-Saver Kit. It contains an inside protection patch, outside protection patch, self-cure tube patches, cement, talc, friction tape, valve parts and pressure gauge—all gathered together so that you know they are all there.

Get it next time you buy gasoline.

Goodyear Tires, Heavy Tourist Tubes and "Tire Saver" Accessories are easy to get from Goodyear Service Station Dealers everywhere.

The Goodyear Tire & Rubber Company, Akron, Ohio





Doing "the Impossible"

The Gordian knot is the ages-old symbol of the seemingly impossible. Alexander the Great gave it a place in legendary history when, unable to untie it, he cut it in twain with his sword.

This famous incident of antiquity has its modern counterpart in the real work of the men whose vision and unrestricted initiative brought forth the great Bell System.

In the development of the telephone, one Gordian knot after another has been met with. Yet each new obstacle yielded to the enterprise of the telephone pioneers. Every difficulty was handled with a will and a courage which knew not failure.

Man's words have been given wings and carried wherever his will directs. Electrical handicaps have been overcome one by one.

The feeble current of telephone speech has had a way hewn for its passage through all physical impediments, until the entire country, from the Atlantic to the Pacific, is within hearing of a child's faint cry.

This record of the Bell System for past achievements is an earnest of future accomplishment. New problems are being met with the same indomitable spirit, which guarantees a more comprehensive as well as a more perfect service.



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One System

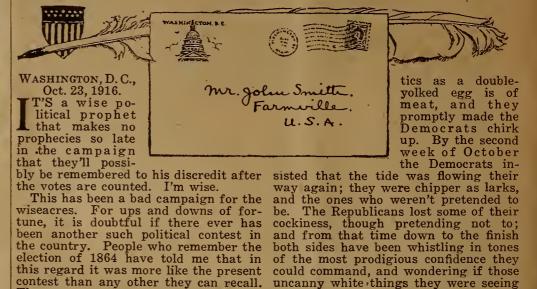
Universal Service

Mogul 8-16—A Real Kerosene Tractor Sells for \$725 Cash f. o. b. Chicago grand Prize WINNER EXPOSITION HEN you buy a tractor, look beyond the price. It is not the price a man pays for a tractor which is of the most importance, but what its power costs. A Mogul 8-16 burning kerosene, in 5,000 hours of work, will save more than its original price over the cost of the same power produced by a gasoline tractor. Remember, the 8-16 is a real kerosene tractor, planned and built originally for using this cheap, plentiful fuel. Price is of minor importance compared with Mogul 8-16 saving. It is our policy to sell the Mogul 8-16 at the lowest possible price, always maintaining Mogul quality, though nowadays some of the materials are almost unobtainable even at an advance in price of from 50 to 100 per cent over the prices of a few months ago. \$725 cash f. o. b. Chicago is the lowest price at which Mogul 8-16 can be sold. Orders placed at once will stand the best chance of being Orders placed at once will stand the best chance of being filled without delay. See the Mogul 8-16 dealer or write us for the story of kerosene before you buy any tractor. International Harvester Company of America (Incorporated) **CHICAGO** USA Champion Deering McCormick Milwaukee Osborne Plano

Nation's Business

Issues Involved at the Coming Election

By JUDSON C. WELLIVER



contest than any other they can recall. There were times when everything looked like Lincoln; again when McClellan seemed a winner; then a reversal.

Right after the political conventions

this year there was a period of supreme

this year there was a period of supreme Republican confidence and almost corresponding Democratic depression. Mr. Hughes looked like a winner in a lope.

Then things shifted, and Wilson came back. There was no accounting for it. Democrats became confident, except those experienced politicians who have for a long time been noting the mercurial quality of the Wilson popularity. These inclined to shake their heads a bit ominously and to hope there wouldn't be time for another reversal before electime for another reversal before elec-

tion.

The reversal came, just as they had feared. It was precipitated by the discussion of the railroad strike and the settlement of its issues by the legislation that the President engineered through

Congress.

That strike settlement was a shock, in its immediate results, to most of the Democrats; a gratifying surprise to Republicans. For from the day when the President took into his own hand the mediation efforts aimed at settling the difficulty and staying off a strike, Demomediation efforts aimed at settling the difficulty and staving off a strike, Democrats calculated that the President would make a vast amount of political capital out of it; Republicans feared and assumed he would. To the great majority of candid commentators it looked as if the crisis had been fashioned just to the hand of a President who would be resourceful enough to who would be resourceful enough to save the country from the calamity. Republicans gloomed, Democrats illumined.

lumined.

But the unexpected happened. No matter what the merits, the country didn't take kindly to the business. A week after the legislation had passed, the campaign's tide had visibly turned. Wilson was on the defensive. The country had misgivings. The terms were denounced as a surrender to the unions of railroad employees. It was charged of railroad employees. It was charged that the whole principle of arbitration in labor disputes had been sacrificed, and that unspeakably dangerous consequences would surely flow from that

Democrats protested in vain that the legislation had received the support of a large majority of Republicans in the House, and a considerable share of them in the Senate. No difference. The country was just as determined to blame the President for doing a piece of mis-chief as it had been expected to be grateful to him for a big service.

So things were reversed again. Republicans "lit up," and Democrats hung

out the crape.

AT THIS period of the campaign the Maine election came on; and it was a Democratic disaster. The Democratic campaign managers insisted to the last minute that they would elect one Senator and had a good chance to carry their Governor. Instead, the Republicans swept the board clean. Their majority really wasn't so big as to warrant all the rejoicing, but for the fact that the Democrats had made the mistake of claiming too much. A rather ordinary Republican majority took on the significance of a tremendous victory by contrast with the claims the Democrats had made.

But the case was not closed yet. President Wilson peeped out of the dignified retirement in which he had been insisting he should refrain from a campaign scramble, to make a few speeches at "non-partisan" occasions on "non-political" themes. These guaranteed-not-to-injure-the-most-delicate-fabric speeches were just about as full of poli-

sisted that the tide was flowing their way again; they were chipper as larks, and the ones who weren't pretended to be. The Republicans lost some of their cockiness, though pretending not to; and from that time down to the finish both sides have been whistling in tones of the most prodigious confidence they could command, and wondering if those uncanny white things they were seeing were tombstones.

THIS country is "normally" Republican by about a million votes. Four years ago the Republicans split, some Democrats went in with the Progressives, and Mr. Wilson was elected by a plurality. The Democrats captured HIS country is "normally" Republi-Congress, and came into power with a perfect opportunity to show what they could do. They did a good deal; even their opponents admit that. Under the leadership and often the spur of President Wilson, they passed an amount of important legislation certainly equal to that of any administration since the that of any administration since the Civil War era. Was it the kind of leg-islation the country wanted? That has been the question in the present cam-

been the question in the present campaign.

Colonel Roosevelt became a candidate for the Republican nomination. A long list of "favorite sons" were brought out, and twin conventions, Republican and Progressive, were called for the same week in Chicago. The Progressive leaders were determined to name Roosevelt in both conventions; the old guard of Republican leaders were just as determined that he should not be named. While bitterly opposed to him, they were anxious to nominate some other man of sufficiently progressive tendencies to make a reunion of Republicans and Progressives possible. Justice Hughes was taken up, pushed, and finally nominated by the Republicans, while the colonel was named by the Progressive convention. As soon as he knew that Justice Hughes had been named by the Republicans, Colonel Roosevelt wired a tentative declination of the Progressive candidacy, which was read to the Progressive gathering unof the Progressive candidacy, which was read to the Progressive gathering un-der most dramatic circumstances. It marked the end of the Progressive party; all realized that. But did it mean the rehabilitation of the Republican party? Would the mass of Progressives follow their leader back into the Republican fold? If with substantial unanimity they would, they would carry the country.

carry the country.

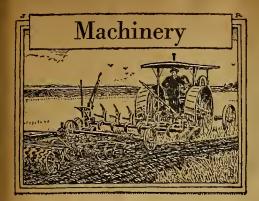
That's what the campaign really has been about. The Democrats have protested that their legislative and admindeserved the support of progressive people. The Republicans have denounced the adminstration for weakness in foreign policy, vacillation, business incapacity, and failure to measure up to an understanding of the needs of national business in such a time.

At the beginning of the campaign two chief issues seemed likely to center the chief interest—aside, that is, from the underlying question of whether the country wanted to "go Democratic" or "go Republican." One was the tariff, the other the management of foreign re-lations under Mr. Wilson.

The Democrats had come into power

at the climax of a long tariff agitation. The Payne-Aldrich tariff act of 1909 had split the Republican party, whose insurgent faction insisted that it was a revision upward instead of the downrevision upward instead of the down-ward revision that had been promised. The country's verdict, in the congres-sional elections of 1910, was against the Republicans; the Democrats were swept into control of the House of Representa-tives, and 1912 completed the perform-ance by giving them also the Senate and ance by giving them also the Senate and the Presidency.

Of one thing there is no doubt: the country is thoroughly prosperous. Republicans say the Underwood tariff would have wrecked business before this time if the war had not come along in time to create a big, abnormal demand for our wares. They point to the fact that the treasury [CONTINUED ON PAGE 28]



Oats Cut with Buncher By J. J. King

THIS is in answer to the question "Have You Used Bunchers?" asked in a previous issue of FARM AND FIRE-My experience with bunchers was during the past summer and fall. I had 50 acres of oats on terraced land, and in some places the oats was very thick.
There were some fruit-tree stumps and large rocks on the land, which made cutting difficult, but I harvested those 50 acres of oats with my buncher, and also cut the oats on the terraces.

We made any size piles we wanted, generally equal to about 12 bundles of oats. After the oats had cured for about twelve hours, we drove near the piles with a hayrack and pitched it on with forks. with forks.

With a buncher you don't have to go to the trouble of raking, and the oats, hay, or whatever crop you raise, is perfectly clean, because it is not dragged on the ground. Stock appreciate the privilege of eating clean food.

Self-Lift a Delusion

By A. Brokaw

THE accounts of swindles against which readers of FARM AND FIRESIDE are warned reminds me of the experience of my neighbor John Dhonest, confiding farmer. On two pre-vious occasions he had been swindled out of several hundred dollars by smooth-talking patent-right salesmen. He vowed that the next representative of a patent device should be forcibly ejected from the premises.

However, some time afterwards while he was away from home, an honest-looking man drove into his yard, stating to his wife that he represented a water-lift or self-pumping device. He said that when it was properly installed in a well the weight of the drinking animal would force the water into the trough.

He stated that he had learned that her husband had been badly buncoed by agents, but that he did not propose to show him his pumping device. As it was near the noon hour, he had simply stopped to feed his horse and get dinner for himself if possible. As her husband was not to arrive home till about one o'clock, he said he was willing to wait and take dinner with the family.

In the meantime the wife's curiosity was aroused, and she asked him to show just how an animal's weight would pump water for it to drink. She said it would not be safe to exhibit the device when her husband was present, but the model could be demonstrated and rewhen her nusband was present, but the model could be demonstrated and returned to the vehicle before he returned. The model consisted of a small bellows placed at the bottom of a two-quart tin can partly filled with water. The can represented the well. The bellows had a check valve at the bottom and a small pipe extending from the top section of the bellows into a watering trough.

the bellows into a watering trough.

There was a rod extending from the bottom of the bellows to a lever which in turn was fastened to the platform the pipe into the trough. It was a sim- successfully.

ple and convincing model and the agent showed how perfectly it worked. The wife was completely captivated, and she knew that John would at once be convinced that this was no swindle or hum-

When John came home and dinner was over, his wife produced the model which soon convinced him that it was a practical device and that certainly there would be a demand for such a pump. The agent soon persuaded him to buy a township right at the exceedingly low price of \$250, the agent selling nothing but the township right. The purchaser of this right was authorized to sell farm

rights at \$50 each.

After considerable expenditure and trouble, Farmer John D—— installed the first of the self-lift pumps on his own farm, only to learn that he had again been swindled. It took the weight of the cow to elevate water into the trough about as fast as a goose could drink it.

New Uses for Trucks

A MOTOR TRUCK is the connecting link between an automobile and a tractor. Trucks are made which in an emergency can be used for pulling a plow, and when that work is done you can equip it with seats and use it for carrying passengers. Motor trucks and automobiles are also made which can be equipped with belt pulleys and used to run stationary machinery. Large trucks



Here is a case where a motor truck carries a full-grown tree

are able, by means of a winch, to clear land by motor power, also to put on and take off their own load through the power of the engine.

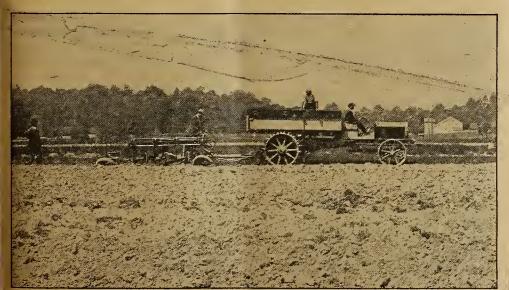
The picture of the tree shows the enormous strength of heavy-duty trucks. But the scene shown is comparatively simple compared with a similar occasion when an oak tree 40 feet high and 13 inches in diameter was moved 42 miles. The tree and the earth about the roots weighed five tons, but the trip was safely made over ordinary roads. A Massachusetts man has a truck that has traveled 31,274 miles in two years, doing all the farm hauling.

Several attempts have been made to use motor trucks in a co-operative way.

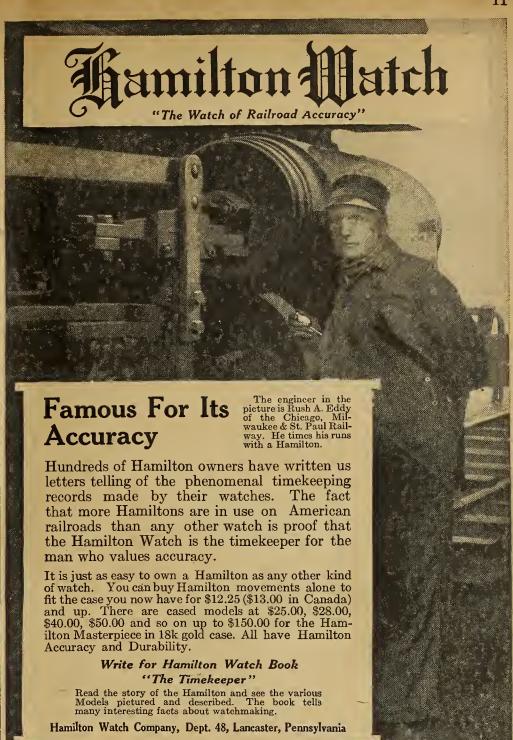
use motor trucks in a co-operative way, but, as with similar enterprises, the work of financing them proved a stumbling block. A group of fifty truck gardeners in New Jersey, however, have apparently made a success of motor

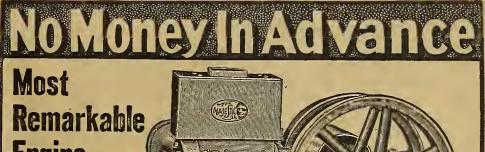
trucks for co-operative hauling.

They purchased four second-hand five-ton trucks at \$1,800 apiece, each where the animal stood. The weight of the drinking animal consequently depressed the bellows and forced water up have now been operating four months



This motor truck might equally well deserve the name of tractor. It is here doing a good job of plowing





Engine Offer Ever Made

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On Hartman's Special Farm Credit
Only HARTMAN'S with their \$12,000,000 capital, their tremendous organization, and over two million customers are capable of such a record smashing offer as this. You can order any size or style engine you want—we will send it at once. You pay no money down; make no bank deposit; no C. O. D. We ask for no security. Everything confidential between you and Hartman's. When the engine comes, work it as though it was your own for 30 days, and if you are not fully satisfied with it in every respect—send it back at our expense, and you'll not be out one cent. If you are completely convinced that the "Majestic" is a wonderful bargain and just exactly the engine you've been waiting for, then keep it and pay us one-tenth in 30 days; or one-sixth in 60 days, giving you 10 months or a full year to pay, whichever you prefer. These liberal terms apply to all sizes and styles of

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Send coupon for FREE Book and learn just what size and style is best for your requirements. Note the sensationally low bargain price put on each engine. You wouldn't believe it possible that such a high-grade engine could be sold for so little. But Hartman does it. And you are not asked to pay a cent in advance or keep the engine if you don't think it the most wonderful bargain ever offered.

The Majestic is the simplest, most durable, most powerful for its H-P. rating and most economical-to-operate gasoline engine. Not a bit like old style, over-heavy types of gasoline engines, which consume enormous amounts of fuel and are, therefore, expensive to operate; or like others, that are so light they literally jerk and tear themselves to pieces when running at high speed or under a heavy load:

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Driving Comforts By W. V. Relma

THERE are many articles that do not come with the average car, which, while not absolutely essential, add much to the safety and comfort of the riders.

One is a rear-vision mirror. This is a small oval or round mirror which is clamped to the wind shield or other convenient place, and enables the driver to see the vehicles back of him. This enables him to judge about making turns, without turning his head. These sell for \$1 up. Some are diminishing mirrors which make the object appear much smaller than usual, and of course a much greater area is covered.

A motor-meter is another useful accessory. This is a heat indicator mounted on the radiator cap of the car. The temperature of the radiator is indicated to the driver at all times. If the fan belt breaks and the heat suddenly becomes dangerous, the meter instantly registers this fact. If the radiator needs water or the lubrication system is sufwater or the lubrication system is suf-fering for lack of oil, this little device calls attention to these needs by giving warning about the high temperature. Most racing cars are so equipped. It enables the driver to discover motor troubles before it is too late. The prices range from \$2.50 to \$10.

Vulcanizer for Small Jobs

Another device suggested by the motor-meter is the fire extinguisher. This is a cylindrical reservoir with a doubleaction pump which forces the extinguishing fluid 30 feet or more at each stroke. A few strokes of the pump will stop a small blaze, and the remaining fluid is good till used. It can be directed right through the radiator, and is very effective. They would from five to the effective. They weigh from five to ten pounds and cost from \$7 to \$10. Extra fluid can be purchased by the quart.

For tourists a trunk rack or baggage carrier which can be attached to the back of a car is extremely convenient. It enables the owner to remove the trunk and take it into a hotel or other stopping place without removing the contents, as would be necessary if the trunk were fastened to the car.

A small steam vulcanizer is a useful accessory for roadside repairs or in the garage, for either casings or tubes. There are quite a number of similar devices on the market, some of which are operated by gasoline. They are usually sold with sufficient material for consid-erable work, and enable the driver to vulcanize his own tubes and repair the smaller cuts in the casings. However, they are not practical for large blowouts, as these require the attention of a skillful tire man.

Spring Oiling Made Easy

Squeaky springs are very annoying to a good driver, who usually wants to a good driver, who usually wants to stop a squeak as soon as it appears. A spring squeaks from lack of lubrication. The spring leaves can be pried apart and either oil or graphite can be applied latured, the leaves but most of us are between the leaves, but most of us are cars must render hard and heroic serv-too busy to do it. So several types of ice. The tubes are especially thick on spring oilers that operate while you ride the rim side where pinching must be have been put on the market. The one resisted.

illustrated is an attachment that clamped to the spring permanently. The lubricating oil is put into the oiler with an oil can, and the spring oiling takes

place automatically. place automatically.

Large feet and small feet frequently have trouble staying upon the foot pedals of a car just when they are needed. To overcome this trouble, rubber pedal coverings are supplied for the various standard cars, which can be slipped on the pedals ready for instant use. They greatly assist in the ease of manipulation and add to the appearance of the car.

of the car.

Drivers who pride themselves on a noiseless car will be interested in "boots" or leather joint-coverings for holding grease around the universal joints and also the steering knuckles and joints. This makes for better lubrication. The steering connections are one of the most neglected parts of a car and one of the most important. These boots, by keeping in the grease, prevent the rattle that soon develops in the various rods and steering connections.

Proper Road Oiling

By J. M. Johnson

THE Highway Department of Illinois gives these suggestions about applying oil to earth roads. Roads should not be oiled until they have a permanent of the state of the st nently established grade. Low, flat, undrained roads should not be oiled until proper drainage has been attended

to.

Roads that are used chiefly for heavy hauling should not be selected for oiling. The main purpose of oiling earth roads is to suppress the dust and aid in the maintenance of a smooth water-proof surface.

It is very important that the road surface be oiled when it is free from dust yet dry enough to absorb the oil. Best results may be expected when the road is reasonably dry for about two inches on the surface.

The oil should be applied at the rate of from one quart to half a gallon per square yard of surface. If the road has never been oiled before, use half a gallon, but if it has been oiled regularly

gallon, but if it has been oiled regularly in the past, a quart per square yard a year will generally be sufficient.

Sanding the road after the oil has been applied is beneficial. The sand should be applied as a light dressing, using one cubic yard for about 150 square yards of road surface.

Briefs of Motordom

AT RACING speeds automobile tires become so hot after a distance of ten miles that they will burn the hand.

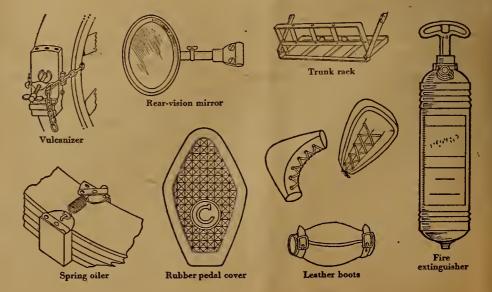
THE rubber business is said to exceed the automobile business in volume. One rubber company has 1,250 men now en-gaged in erecting new buildings.

CONGRESS has authorized the use of motorcycles for carrying United States mail. Heretofore only motorcycles provided with side cars were approved.

Molasses distillate as a substitute for gasoline is being manufactured in Natal, South Africa. A 3,600-pound car made a 500-mile trip using this new fuel, and averaged 16.4 miles to the

ABOUT three fourths of the rubber now used comes from rubber plantations in the East. Plantation or cultivated rubber is cleaner and less expensive than the crude rubber gathered by natives in the forests of South America.

EXTRA heavy inner tubes for tourist use and for rough country are now made to increase tire efficiency when



Wagon Body on Car

By A. L. Roat

OUR farm automobile has proved a good investment the four years it has been on the place. At first we used it mostly for pleasure. Then we sent it to the village blackers. to the village blacksmith, who built a wooden body and set it on the frame in place of the touring body.

It is now used exclusively as a farm wagon for hauling products to and from the station. We haul poultry products, lime, turnips, lumber, coal, in fact al-most anything, and find it a wonderful help and time saver. Last summer, when the work was heavy, we used the machine to haul the hay tedder in the field, and it did the work wonderfully

I also had occasion to haul a carload of Canada turnips from the station to the farm. I used two hay wagons and the farm auto. I made four trips with the machine to one for a wagon, and it is surprising what a quantity of ma-terial can be loaded on such a convey-ance. Sometimes it helps out when we



It hauls everything-sheep, hogs, lime, lumber, coal, poultry, turnips, and oc-casionally serves as a light tractor

have sheep, hogs, and calves to haul, either alive or dressed, or a picnic or fishing trip is on hand.

Road Rock Tested Free

By C. O. Reeder

THE U. S. Department of Agriculture has expressed its willingness to test samples of road-building rock free of charge. Rocks differ considerably in their hardness, binding power, and other qualities which may make them desirable or undesirable for road construction

The rocks submitted for test must be sent prepaid and in accordance with certain printed instructions. The instructions may be obtained from the Office of Public Roads, U. S. Department of Agriculture, Washington, D. C.

Auto Earns Its Way

By Ralph A. Page

Many useful things can be done with an automobile, especially during the harvest season when men and teams are scarce.

During the haying season when we use the stacker, we run out our car and attach the ropes to the rear axle of the car and proceed to lift up the loads of law year the stack using the low gear hay upon the stack, using the low gear for forward and the reverse for backing for forward and the reverse for backing up. This method gives a much more even pull than when horses are used, and we don't have to bother with the worry of backing up the team of horses, which now, by the use of the car, can be at use in some other part of the field or at the sweep rakes. The car works equally well for pulling up the hayfork when we are unloading in the barn.

We, like others, have found the car to be very profitable in marketing.

be very profitable in marketing. In a seven-passenger car one may carry six coops of chickens at a time-two in the rear seat, two on a board frame extending out backward from over the rear axle, and one on each fender-and be at market, 11 miles away, in about thirty

We use our car for hauling ice for household use, for delivering cream, butter, fruit, and vegetables.

Also, during the melon season we can make a run of about 30 miles to the bottoms where they are grown for market use, and return with a fair load of about 35 melons the same day.

Those named are only a few of the many odd yet really important uses a car can be put to, and at a less expense than by a man and team. Moreover, such uses need not injure the appearance of the car by bad scars and scratches. We always remove the rear cushion and spread a tarpaulin over the inside of the back part, placing it so as to act as a lining. This prevents dirty-ing up the inside of the car or scratching the paint or upholstering.

Such uses make a car a valuable business investment aside from the pleasure

and social factors.

We Must Add \$175 to the **HUDSON SUPER-SIX**

Here is an issue which we can't evade. So we meet it fairly and frankly, but give you a full month's warning. Every Super-Six will be sold at present prices while they last. If you can get one, get it.

The Super-Six of the present series is built from materials contracted last year. There are only 3500 more to go out, including open cars and enclosed. And part of them are sold.

The next production—starting December 1-will be like the present models. The changes, if any, will be only minor refinements. But materials for that series were contracted this year, and at prices enormously advanced.

So the cars now in process are the only Super-Sixes we can deliver at the present Hudson prices. The advance will be \$175 per car.

No Way Out

Most people know that Hudson profits are amazingly low for our output. Here is the top-place car-the largest-selling fine car in the world with a price above \$1100. Yet it sells way below some fine cars. Still our standards are so high that, despite our big output, profits are very small.

Now these high-grade materials, in one year, have enormously advanced. We must either adopt lower grades of materials, or add the advance to eur

There is no other way out for fine-car makers whose profits have been fair. This enforced raise means no greater

profit to us. So we frankly state the facts.

We shall continue the present-grade Hudson. Next year's models will be the same as this year's; save perhaps in some minor refinements. There will positively be no change in the Super-Six motor. So the added cost—and that alone—will be added to our price.

Good News for Owners

This will be good news for owners. About 25,000 have, or will get, SuperSixes at present prices. With this patented motor, where wear and friction are almost eliminated, depreciation is a trifle. And like cars, of the next production, will cost a great deal more. So a Super-Six can be bought now at a saving of \$175.

We have under way of the present production about 3500 cars. Part are open models, part enclosed. Many of them are sold.

But many Hudson dealers, suspecting the advance, have unsold Super-Sixes. If you get one now, you will save \$175. For all Hudson dealers will advance the Super-Six when we start production of the next series.

If you can get one now, go get it.

Next Year's Ruling Car

Next year, as this year, the Hudson Super-Six is certain to hold its supremacy. The Super-Six is controlled by our patents—the motor which added 80 per cent to efficiency. So other cars

The Super-Six now holds all the worthwhile records. All the world's stock car records up to 100 miles. It holds the 24-hour record of 1819 miles. It won the Pike's Peak hill-climb-the world's greatest event of its kind.

In September it won the ocean-toocean record. It went from San Francisco to New York in 14 hours 59 minutes less time than the next best record.

It won all these records because of endurance. Because this invention has so nearly eliminated all friction, vibration and wear.

So every man who knows the facts must concede the Super-Six supremacy. Every test has proved it. If you want such a car—even for next year-now is the time to get it, if you can.

Phaeton, 7-passenger . . \$1475 Roadster, 2-passenger . . 1475 Cabriolet, 3-passenger . . 1775

Touring Sedan \$2000

Town Car \$2750
Town Car Landaulet . . 2850
Limousine Landaulet . . 2850



HUDSON MOTOR CAR CO., DETROIT, MICHIGAN

Jacob Biggle on "Corn"

An absorbing article you will find in the November issue of The Farm Journal. Something about the American Indians, the first corn growers. Also some good New England philosophy.

You should read Jacob Biggle's monthly articles in The Farm Journal. Start your subscription to this biggest and best-of-all farm and family paper with the November issue. '5 years for \$1. Goes into nearly 1,000,000 homes. Ask for free sample and your free copy of the 1917 Poor Richard Almanac. Write today.

The Farm Journal

105 Washington Square, Philadelphia

OR a quarter of a century the name "Ball-Band" has stood for everything that is good, strong and serviceable in Footwear. Today 55,000 dealers sell and recommend it and nine million people wear it.

"Ball-Band" Boots have wear built into them. They are vacuum cured. During the vulcanizing, a tremendous pressure makes fabric and rubber one solid piece. "Ball-Band" Rubber Footwear is comfortable. It feels good on your feet.

Whatever style of Rubber Footwear you want, look for the Red Ball and get "Ball-Band." Most dealers sell it, but if yours does not, write us and we'll see that you get the genuine.

Our free booklet, "More Days Wear," illustrates the right kind of footwear for different kinds of outdoor work.

Mishawaka Woolen Mfg. Co., 305 Water St., Mishawaka, Indiana "The House That Pays Millions for Quality"

SAXON "SIX"



Repeatedly has Saxon "Six" proved its superiority

Not once but many times has Saxon "Six" shown itself a better car than those that claim rivalry by way of price.

And these repeated proofs have had their effect.

People now seem to know very definitely and decidedly why Saxon "Six" is the best car in its price class.

Evidently they have been comparing Saxon "Six" with others in its class.

And they have usually arrived at the same deliberate opinion-that Saxon "Six" is a far abler performer, a far better car.

Recently another piece of evidence was added to the proof of the economy of Saxon "Six" when 206 Saxon "Sixes" traveled 300 miles apiece without stopping and averaged 23.5 miles per gallon of gaso-

And proof of its stability and strength is found in the fact that the average cost per car for repair parts over a period of two years is less than \$8.50.

We urge your inspection of Saxon "Six" at once—preferably today. Saxon "Six" is \$815 f. o. b. Detroit.

SAXON MOTOR CAR CORPORATION, DETROIT THE SAXON MOTOR CAR CORPORATION DOES NOT ANNOUNCE YEARLY MODELS



- WE BUY THEM -Thousands of satisfied shippers say we give best and quickest returns. Good reasons: We pay highest market prices, give honest, fair grading and send the money promptly. We charge no commissions and pay express and mail charges. Trappers and dealers, write at once for free price list. It will pay you to ship to us.

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Grist Mill, \$3.00

A splendid low-priced mill to grind corn, roots, bark and all kinds of grain. Height, 12% inches. Weight, 13 lbs. Large capacity, ¾ bushel of corn per hour. You can make it pay you a profit by taking orders from neighbors. Three sizes—\$3, \$5, \$7.

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We pay higher prices because we get higher prices. Fur manufacturers know that the prices we give trappers, hunters and farmers for their pelts attract the best fur offered in the country. When they want especially fine furs they come to us, and are willing to yay extra. We are at centers of manufacture and have long established outlets. So send your furs to us. Get our price lists carly. You are sure of the prices printed. No deductions for commissions, transportation, or anything else. Liberal grading. Prompt returns BECKER BROS. & CO., Originators of Classified Price List Dopt. G-6, 416 N. Dearborn St., Chicago Dest. G-6, 129 W. 29th St., New York



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Returns From Furs

Modest Investments in Traps Pay Well

By OUR READERS

Furs Paid for Schooling

By Dick Van Eldik

OUR nearest town contained about 1,500 inhabitants, and one of the best buildings was a high school. We lived half a mile from this town on a farm of 80 acres. I was a senior in the high school and wished to graduate and receive my diploma, but Father was not yery successful that year on account of very successful that year on account of hog cholera which destroyed his entire herd. In addition the crops were poor, and I realized that the money would have to come from somewhere else.

I had six old traps on hand, and with \$3, which I had saved, I bought a dozen more. Having plenty of time in the morning and after school, I decided I

morning and after school, I decided I could make some money trapping. The first week in November we had a light snow, so on Saturday of that week I went out and set the traps.

Some I set in fresh holes which I found in the alfalfa field, and hoping to catch mink I set most of the others along a small creek that ran through the farm. The next morning I went out to see my catch, as I supposed I would surely have something. I looked at the traps one after another, but all were empty. I was disappointed, but was sure I would have something the next day. This continued for a week, and I was well-nigh discouraged with trapping.

The next day I happened to look into some farm papers, and in one of them I found an account of how to set traps, also some stories told by successful trappers. I decided I had made my sets in "dead" holes, so I reset all the traps, and during the next week caught 10 skunks, 20 muskrats, and 5 minks. I was greatly elated with this success, and more so when I received \$50 for the furs.

The skunks brought \$30, the minks \$15, and the muskrats \$5. I continued trapping two months, and during that time made \$90. Later on other duties compelled me to take up the traps, but I had made enough to permit me to continue school.

Traps \$5; Furs \$108.80

By Fred H. Etter

AT THE opening of the trapping sea-son I bought 30 steel traps, for which I paid \$5. Fifteen of these traps I set for muskrat and mink in a near-by marsh, and also along a little brook. set the muskrat traps under two or three inches of water where the weeds and swale grass had been disturbed by and swale grass had been disturbed by the little animals in search of food. For bait I placed a small stick with a piece of apple at the end, securely in the ground so the apple was about 18 inches above the pan. The mink traps were set in the same way, except that they were baited with small pieces of meat. Ten of my traps were set for skunks and weasels at the entrance of holes and dens which I thought they were using. The weasel which prowls into every hole it sees is often caught in traps set for skunks.

The remaining five traps I set in and around hollow trees, with the expectation of catching raccoons. I fastened a bright piece of tin on the pan of each trap. The raccoon is a very curious animal, and in satisfying his curiosity

he is caught in the trap. Here is the list of the furs I caught and what they sold for:

7 muskrats at 40c	\$22.80
7 minks at \$5	35.00
1 skunks at various prices	28.50
5 raccoons at \$4	20.00
5 weasels at 50c	2.50
Total	\$108.80

Deducting the price of the traps, which was \$5, I had a balance of \$103.80. During the winter time when there is little work to do on farms and where there are fur-bearing animals, a little time spent in catching them pays

From Muskrats to Sheep By J. B. Morris

WHEN I was a boy fifteen years old, I made my first and probably most profitable investment. I was living on a farm with my aunt and uncle near one of the many creeks that are on the east shore of Maryland. They had a few steel traps, and these I set for muskrats along the shores of the creek.

At that time prices were low. The fur of the red muskrats was worth only 10 cents, and of the black ones 12 cents. But one winter I caught enough to total \$5, with which I bought a sheep from my uncle. He allowed me to keep it free of charge.

The first year I sold her lamb for \$4

The first year I sold her lamb for \$4 and the fleece for \$1.32. The second year the lamb brought \$4.50 and the fleece \$1.25. I then left the farm. While this investment was on a small scale, it was a good one and shows how a small beginning may develop into a branch of farming well worth while.

Use High-Grade Outfit By N. R. Darragh

WITH the cold days of November, men and boys begin to plan for the hunting and trapping of fur-bearing animals. Guns are carefully gone over and oiled so that everything may be in readiness when the calendar shows the

season is open.
Some States do not protect their may be hunted and trapped at any time, but it is a shortsighted sportsman who will take an animal before its coat of

fur becomes good.

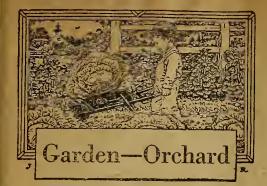
fur becomes good.

It is really a crime to set out traps before the middle of October, and in most sections it is best to wait until November 1st. Fur houses report that trappers and hunters sometimes double their profits by waiting till the furs become prime. They then command better prices than early in the season.

Among the animals whose furs are valuable, and which commonly abound on farms, are the skunk, coon, mink, muskrat, and opossum. All of these may be taken in traps. Time spent now in getting the traps ready and replacing any that are broken will save delay when the active trapping season begins. In buying supplies, baits, and traps get only the best. While the first cost may seem high, the best goods are most reliable, and as they will take more animals the total returns will justify the expenditure.



Walter S. Chausler sends this picture of his first shipment of furs, including 18 opossums, 11 muskrats, 7 skunks, 4 coons, 1 fox, and 1 mink



Make a Fall Fight

By F. W. Orr

Too Many farmers, progressive in most respects, who raise orchard ruits do not practice having a thorough and general cleaning up of the orchard before winter closes in.

Brush piles, heaps of leaves, rubbish along the fence rows, and unsalable ruit are allowed to remain in the orhard until spring before being burned or otherwise disposed of. Nearly all he insect pests that make trouble for he orchard owner take advantage of verything in the nature of rubbish in which to spend the winter. Time spent ate in the fall clearing everything that will harbor insects is a profitable fight when the enemy is taken at a disadvan-

Asparagus Out of Season By T. H. Garekol

NEARLY everybody enjoys asparagus. From early March until August asparagus may now be found in many of the best markets. It is so easily forced out of its regular season so as to make this vegetable available from the beginning of December through the entire winter. product of the gardener's skill is naturally quite expensive. The demand for this crop when marketed out of season is becoming the control of is becoming greater and the returns to

the enterprising grower are excellent.

I have found that the forcing may be done in any place where a temperature of 55 to 60 degrees may be maintained either in hotbed, pit, greenhouse, or by any contrived plan where the temperature can be kept at the desired uniform degree. I use the roots from four- or ive-year-old plants for forcing, digging the roots late in the fall with as much lirt adhering to the roots and crowns as possible. These roots are put in a cool sellar or any place where the temperature is but little above freezing. When thus stored the roots are covered with and and soil to prevent their drying. and and soil to prevent their drying out, and are kept in this way until wanted for forcing.

Forcing asparagus in hotbeds or other substitute for a greenhouse is rather costly, and there is much less trouble in securing a paying crop in the green-

Where a greenhouse is used, no better use of the space under the benches can e made than for forcing asparagus. The loor under the benches in my green-house is soil. I dig a pit about a foot deep and scatter four inches of good soil over the bottom, then set the clumps of asparagus roots close together, scatter a few inches of dry mellow soil between and over clumps, and then water it thoroughly. I blanch the shoots by shut-ting off the light by use of burlap hung along the sides of the benches. There is now a tendency among the best judges of asparagus to prefer the unbleached asparagus or that which is only partly

I also use boards placed against the posts to construct trenches in which the sparagus can be forced in addition to

the trenches built under the benches. The first ten days after setting, the roots should be kept rather cool—say at a temperature of 45 to 50 degrees—then change to 55 to 60 degrees, or slightly higher in the daytime will be no detriment. Too heavy watering may do more harm than good. At least three or four weeks are required to develop the asparagus to cutting size, after which several cuttings may be made during a period of eight to ten weeks. In order to secure a succession of cutting throughout the winter, I plant reserve roots every three or four weeks after the first planting. Gardeners can easily try out this plan of forcing asparagus out of season, and thus learn just what the returns will be for them in their own particular market.

When to Cover Strawberries

By Annie Wade Galligher

IF THERE is any real advantage in waiting until the ground freezes solid, before putting on the straw or other covering material on strawberries, we have failed to discover it. We have grown strawberries under various methods for years, and have found that where they are covered before hard freezing begins the plants come through in first-class condition, being nearly as in first-class condition, being nearly as green and fresh-looking in the spring as when first covered. On the other hand, those left until later always look "sick." There is no better mulch for strawberries than dry leaves, but they have to be weighted down with branches or other anchoring material. November 15th is late enough, here in Ohio.

Transplanting Shrubbery

TRANSPLANT all shrubbery in the fall if possible. There will be a root development made very early in the spring, so that the shrubs will make a quicker start and get well established before hot, dry weather comes. Do the work carefully, and place a good mulch of strawy manure around the base of of strawy manure around the base of the shrubs.

Safe and Sane "Spud" Storing

By B. F. W. Thorpe

SHOULD I be asked what line of experiment station work now promises the greatest practical results for farmers, I should not hesitate to say that seed improvement and proper care of farm seeds have as good a claim for that honor as any now in sight.

The Wisconsin Experiment Station, among others, has been giving special attention to potato-seed improvement, and of late years is showing that proper storage of seed stock is just as impor-

storage of seed stock is just as impor-tant as the improvement of seed. For several years the main effort was to standardize the leading commercial po-tato varieties grown in the State. The number of the most approved varieties has been reduced to six, some of which give best results under the different varying conditions of climate and soil in different sections of the State.

When holding the seed stock for supplying growers in the spring with improved seed, it was found by the station experts that the seed lost much of its value through the effect of improper storage conditions. To make sure of good and safe storage, a cellar was built in a well-drained hillside. The walls and roof of this cellar are of concrete construction. Both walls and roof were then lined with lumber which provided an air space of 1½ inches. This cellar, with a storage capacity of 3,000 bushels, has now been in use for three years, and has given excellent satisfac-



Concrete potato-storage cellar built in a hillside by the Wisconsin Experiment Station at Spooner, Wisconsin. Capacity, 3,000 bushels

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You work hard for your moneymake it work hard for you. 65c or \$1.25 invested in this thoroughbred Hanes Underwear does the work of twice as much.

Hanes is mighty comfortablecozy warm—perfect fitting and bull strong. It's the biggest underwear bargain in America-bar none. And the price is the most amazing feature of all.

65c \$1.25 per Garment **Union Suit**

JNDERWEAR

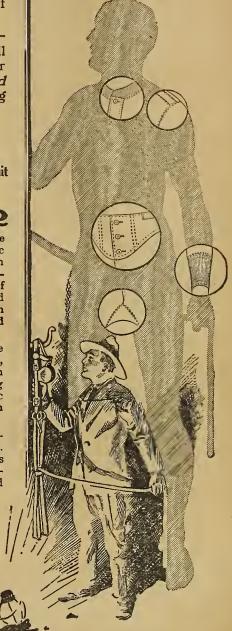
Hanes Union Suits have a Comfortable Closed Crotch that stays closed; Elastic Shoulders with Improved Lap Seams which "give" with every motion; snug-fitting Col-larette which always keeps the wind out of the neck; Improved Cuffs at wrist and ankle which hug close and do not stretch out of shape; and every button is a good Pearl Button sewed on for keeps.

Hanes Separate Garments have Double Gussets to double the wear; a Comfortable, Staunch Waistband; Improved Cuffs which hug the wrists and won't flare out; a snug Elastic Collarette which never gaps; Elastic Shoulders with Improved Lap Seams which 'give" with every motion.

Pre-shrinking keeps all Hanes Underwear elastic and true to size and shape. Seams are unbreakable where the wear is greatest. We guarantee Hanes Underwear absolutely-every thread, stitch and button.

The price of wool is sky-high—even shoddy has soared. But in Hanes you get the same good, clean cotton and the same high value as always. If you don't know a Hanes dealer, write us.

P. H. HANES KNITTING COMPANY Winston-Salem, N. C.





Pull big stumps by hand Clear your stump land cheaply. No expense for teams or powder. One man with a

Stump Puller can outpull 16 horses. Works by leverage—same principle as a jack. 100 lbs. pull on the lever gives a 48-ton pull on the stump. Made of Krupp steel—guaranteed against breakage. Endorsed by U. S. Government experts.

Write today for special offer and free booklet on Land Clearing WALTER J. FITZPATRICK

Box 47, 182 Fifth St., San Francisco, Cal.











But Call it Off to Try Mutual Selling

By CALVIN FRAZIER

brought together by a call issued by the Milk Producers' League of the territory supplying that town with milk. The business in hand was to get a better price for milk.

Everything grown on the farm, said one speaker after another, had gone up in price, except milk. On that the price had not raised in seven years. Cows, feed, hay, land, labor—everything was costing more, and could be sold for

"What is the use of feeding hay and a lot of still more costly things to cows in order to make milk when the ton of milk was worth only a little more than the ton of hay?" demanded one

speaker.
"Why not sell the hay and corn, raise more dollar-and-a-half wheat, pay out less for high-priced and not very effi-

cient labor, have an easier time, and make more money?" suggested another. "Because," came the reply from a speaker later in the discussion, "we need live stock to keep up the producing quality of our land. We can't take off good crops year after year without put. good crops year after year without putting back into the land the elements that it gets best from live stock."

Every farmer there knew that was true. It was in a section where commercial fertilizers are heavily used, and where animal fertilizer is also necessary to keep soil in best condition.
"Yes," retorted the man who wanted

to cut out the milk business and sell the crops direct, "that is true; but we can stand it longer than the people who need the milk. Let half of us quit raising milk, or all of us raise only half as much milk as at present, and there would be a shortage that would soon

bring prices up to a reasonable basis.

"Suppose," he went on, "that we would all unite and quit sending milk here—don't you think that would raise our price mighty shortly?"

There was applease for this

There was applause for this statement. Fully 600 milk producers were present, out of the 1,400 who regularly ship to that city. The absent ones were almost all represented through officers of unions, granges, and local dairy associations. There had been a vast amount of talk about a milk "strike" a general stoppage of shipments, starving the town into submission.

I couldn't help notice that every suggestion of "milk strike" brought forth applause. The more vigorous and insistent the speaker, the more applause he got. That convention was plainly on the point of doing something that I believed would be most unfortunate.

THE farmers had a good case. They were not getting enough for milk. More than anything else, they needed to make the public realize this. They needed its sympathy, not its reproba-tion. On a fair statement of their whole case, before any fair arbitration board, they would have been allowed better prices.

To strike would be to injure them-selves with public opinion, to inflict real hardship on the community—especially the children and the sick—and to array sentiment against them. Moreover, it would result in the dealers' bringing in milk from distant sections, breaking down the strike, and permanently injur-ing the demand for local milk. I knew that because I had learned how a milk strike in that community had ended several years before. But it was all leading toward a strike resolution, none the less, when a man in a rear seat rose.

He talked quietly; had none of the airs and manners of some of the speakers that had gone before. But he had some very specific things to say, and he was listened to despite that his audience was thoroughly hostile at first. It seemed in fact to be part of his trick to say disagreeable things. It forced at-

"A resolution to strike," he began, "would disrupt this association. I'll tell you why. A strike could succeed only if we all struck together and stuck together. Who believes we would do that? Who believes, if those who are here did, that the producers who are not here would go along with us?"
He paused, looked slowly around over

"Let a strike resolution pass this meeting by unanimous vote, and how many of you would start right from this hall to make a new contract with your dealers, hoping to get a little better price in view of approaching trouble? "I can see a lot of men right now who are thinking just that way. I talked to

OT long ago I attended a big gathering of farmers in a city of considerable size. They had been said, 'there's no danger. They'd all vote for a strike, but most of 'em would be coming in my side door before they left town, promising to stay by me if I'd only give 'em a half cent more. These farmers won't stand together, and we dealers know it."

That was disagreeable talk, but the

meeting listened to it. He was describing just what happened a few years ago when a strike was attempted. Having been disagreeable enough to serve his purpose, the speaker suddenly changed

his tactics.

"It's true," he said, "that farmers have the reputation of not being able to have the reputation of not being able to act together; and they deserve it. But it isn't entirely their own fault. City people have to act together because their way of life compels co-operation. Not every man can have his own street car, so they all unite and have a few for the whole population. It isn't 'possible for each family to have a well in town, as we farmers do, so they build a water-works system."

THE speaker started talking about co-operation; not about the easy gen-eralities of it, but facts and figures,

names and dates.

He first told about the California
Fruit Growers' Exchange, doing over \$40,000,000 business in one year, without a dollar of capital, no property except some chairs, rugs, desks, and other office fixtures. Then a brief allusion to

office fixtures. Then a brief allusion to the big co-operative marketing organization on the eastern shore of Maryland, which does \$5,000,000 or \$6,000,000 business a year.

"There are 1,400 odd shippers of milk to this city," he said. "What does the average milk-shipping farm represent in capital? Estimate it at \$10,000; I suppose it's nearer twice that. But at \$10,000 for each farm, it means that \$14,000,000 of capital investment is behind the milk industry here. hind the milk industry here.

"Yet a few minutes ago I heard one of you say that it was no use for the farmers to try to get together; they couldn't get capital to work with.

"Why, if all our farms were sold and we moved into one town to live by ourselves, what would be our first move? We'd want a water-works system and a sewage disposal plant; and, like other folks in town, we'd vote taxes against our \$14,000,000 worth of property to build them. With all that wealth back of us, with common responsibility, we could have anything we wanted.

"Why can't we act together, living in the country as we do? Why can't we farmers serve our own best interests as town people serve theirs? I believe we can; other farmers do. If we can, and will, we can solve this problem to the advantage of both ourselver and this

Were they listening? I should say so! He sketched rapidly a simple plan for a dairy league, to establish an agency through which to handle the members' milk; proposed that a co-operative plant be built in the city, to receive, store, pasteurize, bottle, and distribute the milk, the members to sign contracts binding themselves for a fixed time to let this agency have exclusive right to handle their milk. He explained how this would reduce cost of handling, bottles, distribution—every-

When he sat down the convention stood up to cheer. In fifteen minutes the business was over. That man had been made chairman of an executive committee to work out details of his project, and report at a subsequent meeting. The idea of a strike had been forgotten. Something bigger and better was in everybody's mind.

I'm told, since the meeting, that the scheme is working through preliminary stages with every prospect of success. It will succeed if it is handled rightly. The town people, who had been fearing a strike and milk starvation, are enthusiastically supporting the co-operative

Parcel-Post Butter By Marie D. Hunter

NOWHERE have the advantages of parcel post been felt so strongly as on the farm. For instance, take a district like the one in which we live, twenty miles from a railroad, fifty from a
large Eastern city, fine fertile land, and,
until this new and most useful institution, no practical way of getting a small
but valuable product like butter on the
but valuable product like butter on the

and separator parts spend the day in a
high shelf in the sun. They are taken
in sweet and pure at night.

I feel sure there are other farms far
removed from the large markets whose
owners may profit through the channel
of the parcel post

A short time before the system was adopted, a friend, whose father was a large farmer, complained to me that she owned a fine cow and had no way to dispose of its products of milk, cream, or butter. All her neighbors had cows of their own, and it was literally impos-

sible to reach a customer.

Now all of that is changed. We are just as far from the railroad and the large cities as formerly, but Uncle Sam carries our produce. From a little farm grown up in small pines with no prospect of deliverages we have developed as pect of deliverance, we have developed a prosperous-looking dairy farm, with a pretty herd of Jerseys, and every prospect of future success. All of this would have been impossible but for the parcel

This is the way it began:

As on all farms where there are a few cows, we had a few pounds of butter left over at the end of each week which might be sold at the country store for 18 cents in summer and 20 cents a pound in winter. By the merest chance I found shortly after the parcel service came in that a friend in Washington, D. C., would take my few extra pounds at 32 cents a pound, quite a raise to start with.

Those first efforts at shipping were very crude. I had the old-fashioned round print, any kind of box I could get, and tissue paper immediately around

the butter.

However, my butter was good, the season was winter, and my customer was kind, so things went on for a while in that fashion until the possibility of a real dairy farm came into our minds and I began to investigate churns. I selected what I considered the finest one made, and still think so. Not only did we get a churn, but an oblong print that made just one pound of butter, 50 parchment papers to go immediately around the butter, 50 paraffin-covered boxes to hold each individual pound, a dairy hold each individual pound, a dairy thermometer, and five lessons in buttermaking. All of these came with the churn for the price of the churn. It meant quite a revolution in my buttermaking and shipping.

After I used those first 50 papers and cartons, I found that I could purchase them by the hundred at a cost of little over one-half cent a pound of butter packed. That made shipments more attractive and more customers possible.

attractive and more customers possible. The equipment also made it possible to ship the butter all summer and during the hottest weather. During the first summer that my friend took it she said that when the hot weather came she expected to see it come dripping at each delivery, but not once in the whole sum-mer did she see any great difference between that and winter-time butter.

The butter leaves me at noon on one day, hard and just off the ice, and reaches Washington the next morning by the first delivery. Last winter I got 52 cents a pound for sweet butter in New York. I live in Virginia.

TO GET the best price, I churn my butter from sweet cream and do not abutter from sweet cream and do not salt it. Some people have trouble in churning sweet cream, but after you once "get the hang of it" you will never go back to the other way. The butter is so much better. The sweet cream should be a little thicker than that allowed to "turn," and if you have a cream separator this is very easy to regulate. regulate.

An oily butter will not command a good price. The cream must be churned at a very low temperature at all seasons if the butter is to have a fine tex-

Especially is this hard to regulate in summer. Even though I take the cream directly from the ice and churn very early in the morning before the worst heat, I have to work very fast and be very careful, else it will not be of good quality.

The five lessons in butter-making give

a fine general idea as a working basis, but even they cannot be followed too closely as to temperature. They advise 62° as the best, but I find that even in winter a lower temperature is better if the butter is to be of the finest waxy texture. In summer it is practically impossible to have the cream too cold on a hot day.

I have seen so many complaints in all the farm papers from farmers in all sections of the country about not being able to make the butter "come." It seems to me that the first answer to this is the kind of churn. The next important thing is to have the cream sweet, thick, and cold. The result will be beautiful granular butter that will command the highest price on the market. mand the highest price on the market. Perfect cleanliness is of course an

adjunct of good butter-making. After a thorough cleansing my milk buckets and separator parts spend the day in a high shelf in the sun. They are taken

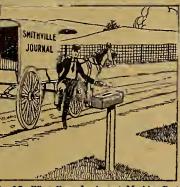
of the parcel post.

What Would You Do if You Got a

Message Like This?

Vo. 16—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?





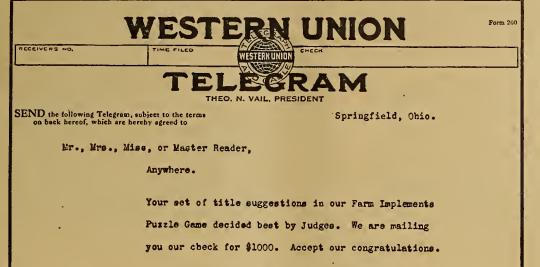




No. 20—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?



The Reprint and Reply Book for which we have already received orders, is not quite ready for delivery. Books will be mailed as promptly as possible.



What Such a Telegram Would Mean

Publishers, FARM AND FIRESIDE.

IRST of all, it would mean that your title suggestions for the fifty pictures being published by this paper had been found most fit, or appropriate, or applicable. And this would mean that your playing the Farm Implements Puzzle Game had brought you \$1,000. This much the telegram itself makes clear. It would mean that your having used your spare moments in play had brought you what years of toil often fails to bring less wide awake persons. What the receipt of such a telegram would mean—what the winning of the \$1,000 would mean to you, can just be told by you. Or you might win \$500 or \$250 or \$125 or any one of the 400 awards, totaling \$3,500, which will be awarded at the conclusion of the Game.

To Get Such a Message

OU need only submit suggestions for titles for fifty pictures, each representing the name of some wellknown farm implement, machine part, or mechanical term. Fifteen pictures have already been published. Five more (Nos. 16 to 20) appear on this page, and the remainder, thirty, will appear in future issues (5 different pictures in each issue).

To Get Your Share of the \$3,500 in Gold

HE coupon in the lower left-hand corner will bring you complete information, without any charge. The coupon in the lower right-hand corner shows you how you can obtain a copy of the Official Key Book free with a three years' subscription to Farm and Fireside. Read the descriptive matter in the right-hand column, then send us one of the coupons without fail.

The Farm Implements Puzzle Game—The Awards—Key Book, Etc., Etc.

Fifty pictures, each drawn to represent some Farm Implement, Machine Part of Mechanical Term, will constitute the Farm Implements Puzzle Game. The pictures now have no titles. You are invited to submit title suggestions. Pictures Nos. 1 to 5 appeared in our September 16th issue; Nos. 6 to 10 in our October 7th issue; Nos. 11 to 15 in our October 21st issue and Nos. 16 to 20 appear on this page. Five additional pictures will be printed in each succeeding issue until all fifty have appeared. When all fifty have been printed (the last installment, Nos. 41 to 50, will appear in our January 20th issue) you can submit your sets of title suggestions, not before. You will be given until midnight, February 20th, to prepare and submit your sugges-

The awards, totaling \$3,500 and to be divided among four hundred participants, follow: For the best set of title suggestions \$1,000; for the next or second best set \$500; for the third best set \$250; for the fourth best set \$125; for the fifth best set \$100; for the sixth best set \$75; for the seventh best set \$50; for the eighth best set \$50; for the ninth best set \$25; for the tenth best set \$25; for the eleventh to fiftieth best sets \$10 each; for the fifty-first to one hundred fiftieth best sets \$5; for the one hundred fifty-first to three hundredth best sets \$2 each; for the three hundred and first to four hundredth best sets \$1 each; total, four hundred awards, \$3,500.

For the convenience and guidance of participants, and to place all on an absolutely equal foot-ing, and to make familiarity with farm machinery unneces-sary, we have also published a list of about three thousand implements, parts and terms. This is called the Official Key Book. As ideas for each picture were obtained from it, you can see that it must contain the titles to the fifty pictures.

it must contain the titles to the fifty pictures.

Copies of the Official Key Book are on public file in the offices and agencies of this publication and one copy will be placed on public file in any town when proper arrangements are made. We offer a Key Book free to anyone subscribing for Farm and Fireside for three years at \$1.00. It is not a requirement that you subscribe. For information only, send us the coupon in the lower left-hand corner. To subscribe at the special rate of three years for \$1.00 and get the Official Key Book and all pictures which have appeared to date free, send remittance with the coupon in the lower right-hand corner. While waiting for your Key Book and complete information, study the pictures, and jot down all the suggestions which occur to you. Then when you have the official list, you can check your notations and also get new ideas. Reprints of the pictures which have appeared in preceding issues will be sent you free with Key Book, remember.

Free	Info	rmation	Coupon
Dinne ann			

Springfield, Ohio.

Please send me descriptive folder and full information regarding the playing of "The Farm Implements Game."

R. F. D.State..... This request places me under no obligation of any kind. If You Want Us to Send You a Telegram Like the One Above, Send Us One of **These Coupons** To-day

Special Subscription—Free Key Book Offer Coupon Farm Implements Game Editor, Farm and Fireside, Springfield, Ohio

I desire to play your Farm Implements Puzzle Game. Enclosed herewith please find one dollar (\$1.00). Please extend my subscription to FARM AND FIRESIDE for three years from present expiration date. (If you are a new reader, subscription will be started with first issue sent you.) Also send me, free and postpaid, one copy of the OFFICIAL KEY BOOK containing a list of farm implements, parts and mechanical terms to be recognized and used in supplying titles to the fifty pictures, together with other data and information regarding the Game.

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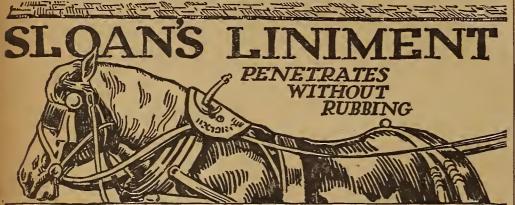
you lay in a stock of P. A. and jam that friendly old pipe brimful—and strike fire! This tip is worth a lot in happiness and contentment to every man who knows

what can be gotten out of a chummy pipe with P. A. for "packing."

Prince Albert can be had every-where tobacco is sold, in toppy red bags, 5c; tidy red tins, 10c; handsome pound and half-pound tin humidors—and—that clever pound crystal-glass humidor with sponge-moistener top that keeps the tobacco in such fine shape, always!

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lame horse can't give full service. Relieve the bruised muscle, strained tendon or stiff joint with Sloan's Liniment, quickly penetrates. You will find many other farm uses for it.
Thousands of farmers indorse this universal relief for pains and aches. At all dealers, 25c. 50c. \$1.00 a bottle. The \$1.00 bottle contains six times the 25c. size.

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Ready-Cut Houses

Keeping Up with New Ways of Building

By B. D. STOCKWELL



This is a ready-cut house. It it built just like any other permanent house except that the lumber comes all prepared and ready to nail together

EEING your house before you build it, knowing almost exactly what it will cost, and putting it up in half the usual time—these are a few innovations likely to interest the modern home builder. But such advantages are not to be had without drawbacks, and here are a few comments on the readybuilt-house situation, based on a careful investigation.

A ready-cut house, as the name indicates, is one which has all the lumber cut to the proper length and shape at the mills instead of being cut by the carpenters on the job. Until he is ready to fit baseboards and moldings and perform other niceties of interior work the carpenter can leave his saws, chisels, and all cutting tools at home. For the main construction he needs only his hammer, plumb line, level, and mallet. hammer, plumb line, level, and mallet. The house, barn, henhouse, or other building, as the case may be, has been previously selected from an illustrated catalogue, and is shipped in a box car from the mill to the builder's nearest railroad siding.

Everything comes at once, including millwork, nails, plaster, glass, locks, hinges, tin flashing, paints, and varnish. In some cases built-in bookcases, kitchen cabinets flower boxes, and even trellises

cabinets, flower boxes, and even trellises are included in the price quoted for the

All of the lumber is classified in bundles or otherwise marked, so the house goes together just like the parts of cutout puzzles when you have the key to the puzzle before you.

Extra Items to Consider

You have no architect's fee to pay, nor is there the customary argument with the contractor about what he is to furnish and what things are "extra" when the specifications are indefinite in certain matters, as they usually are. Furthermore, the prices quoted for the material furnished for ready-cut houses are about one half the price usually paid for a completed house of the same quality built in the ordinary manner. quality built in the ordinary manner.

A ready-cut house is not to be confused with a portable house. Aside from the fact that the cutting and fitting is all done at the mill, a ready-cut house is

in other respects just like any other permanent house.

However, there are certain expenses which must be met in the erection of a ready-cut house aside from the cost of the house itself and labor of putting it together. Among these are the cost of freight on lumber, excavating, foundation, cellar windows, chimney, plumbing, heating, lighting system, guttering ing, heating, lighting system, guttering and spouting (in most cases), interior decoration, grading around house, walks, cellar floor, and items of kindred nature. Wood shingles for the roof are usually specified, but other forms of roof covering may be selected, though usually at an extra price. Hardwood finish, though not regularly specified, may be secured at extra cost. Flooring for the attic is seldom included in the for the attic is seldom included in the specifications, but may also be had at additional cost.

Hire a Good Carpenter

When all expenses in the foregoing list are taken care of, the total cost will be brought to a point somewhere about 10 per cent less than that of a house built by carpenters in the regular way under an architect's supervision. Ready-cut houses in numerous instances have been

erected by the home owner himself with unskilled labor, but it is best to hire at least one good carpenter.

His experience in the handling of lumber, bracing, leveling, erection of scaffolding, shingling, and many details of construction will hasten the completion of the job and be a safeguard tion of the job and be a safeguard against errors. However, if one is situated where he cannot get a carpenter at the time desired, a ready-cut house can be erected by unskilled but intelligent labor more easily than a house

built in the ordinary way.

But in either case, only about half the usual number of men will be needed, as most of the carpenter work has already been done, by machinery. It is the same principle as erecting a modern office building for which the steel girders and framework were previously prepared at framework were previously prepared at the mills and when received on the job they need only be bolted or riveted to-

But even with [CONTINUED ON PAGE 25]



Here is another home built from ready-cut material. You know in advance just how the house will look



Live Stock

The Beef-Cattle Herd

By W. L. Blizzard

THE man who has a herd of good breeding cows surely will have a dividend payer in the future. To as-

dividend payer in the future. To assemble a good herd of breeding cows is by no means a small task. In building up a herd of breeding cows, there are two very important things to consider—type and uniformity of type.

If a breeder can get his herd recognized as producing cattle of a certain desirable type and then turns out only that type, he will be able to secure better prices on the average than if he has always a few of many kinds to offer. A man then starting out to breed cattle must first make up his mind what type he wants to produce, and then act ache wants to produce, and then act accordingly. It is by no means necessary that cattle be the best in the world to make a breeder famous. He will do make a breeder famous. He will do well if he succeeds in creating a reputation for always having in his herd the real rent-paying, thick-fleshed kind with size, substance, and quality.

Uniformity in a herd is the surest index of the skill of the breeder. A study of the most successful herds of this country will demonstrate that universal country will demonstrate the country will demonstrate the country will demonstrate the country will be universal country will be universal countr

this country will demonstrate that uniformity of type and uniformity of breeding are most desirable if the highest and best results are to be obtained. They may be equal to bran and shorts, or they may be still more plump and

represent a greater feeding value.

Look at the quantity of grain the straw carries, estimate what that will weigh out, and you will very nearly have the feeding value of your rusted wheat crop. The shrunken wheat kernels in rusted straw stick pretty tight in the chaff and on that account sattle nels in rusted straw stick pretty tight in the chaff, and on that account cattle will be forced to chew them pretty well so that the feeding value ought to be reasonably well utilized.

So much rusted straw has been fed in past years when rust scourges occurred and no serious effects have re-

curred and no serious effects have resulted from it, that it would seem that there is little risk in feeding it.

The veterinarians have recorded a few cases of sickness or disease in the history of their experience which they think have been caused by animals eating an excessive amount of grain rust. They generally advise that a little of some other roughage be fed to live stock that are getting rusted straw. They also suggest that stock be changed gradually to a ration of rusted wheat when you begin feeding it, and that the dust be shaken from the rusted straw as much as possible in handling it be-fore it is fed to stock. They suggest further that a close watch be kept of the animals and changes made to some other feed if sickness occurs that does not come from some other cause.

To Examine the Horse's Eye

By James Brown

DEFECTIVE eyesight in horses is a Very serious fault, and to it can be directly traced the cause of innumerable accidents. A blind horse is always dangerous under the saddle or in single or double harness. A horse with a defective vision that distorts ordinary objects met with on the road is even more objectionable, in some respects, to ride or drive than the horse that is totally



The cows in the beef herd should carry plenty of scale, have strong constitutions with abundant vitality

The uniform herd will produce cattle blind. Shying in many instances is the nore nearly of one type, and for that eason they will look better, feed better, ell better, and produce better. The key o success is sound judgment to maintain a uniform type and character, with judicious feeding and management.

In building up a herd, the best pracice to purchase a selection of cows or eifers from an old-established breeder f good repute, whose herd has been oted for years as having produced nimals of the best type and quality. t is much better to invest money in a ew first-class cows, say ten, than in touble the number of inferior ones at bout the same cost. Remember, there is a wrong kind and a right kind.

The cows should carry plenty of scale, trong constitutions with abundant viality. They should show good beef onformation with good feeding qualities. Quality should not be overlooked, ut in the search for quality do not acrifice size or select delicate animals.

Feeding Rusted Straw

By Herbert Coxen

THE feeding value of rusted wheat in the straw is mighty variable and epends almost entirely upon the mount of grain in wheat heads. ealthy wheat straw is poor feed, and adly rusted wheat straw, on the aver-ige, is no better and in many instances ot as good as bright straw. Wheat traw that is very badly rusted seems to lave very little substance in it, and tock do not commonly find it palatable. hrunken wheat is good feed, and the plumper the berry the greater the feed-ing value. To decide the feeding value is a matter of estimating the quantity of wheat grain a given lot of straw contains. The wheat grains may be so thin that they have little feeding value.

result of poor eyesight.

The buyer or owner who is apprehensive regarding a horse's eyes or eye may satisfy himself whether or not disease exists by following the directions here given for the examination of the eye: With the thumb and forefinger gently part the eyelids, thus exposing to view the eye and the mucous membrane lin-ing the lids. The right hand should be used in manipulating the lids of the left eye, and the left hand for the right eye, the finger in each case being pressed on

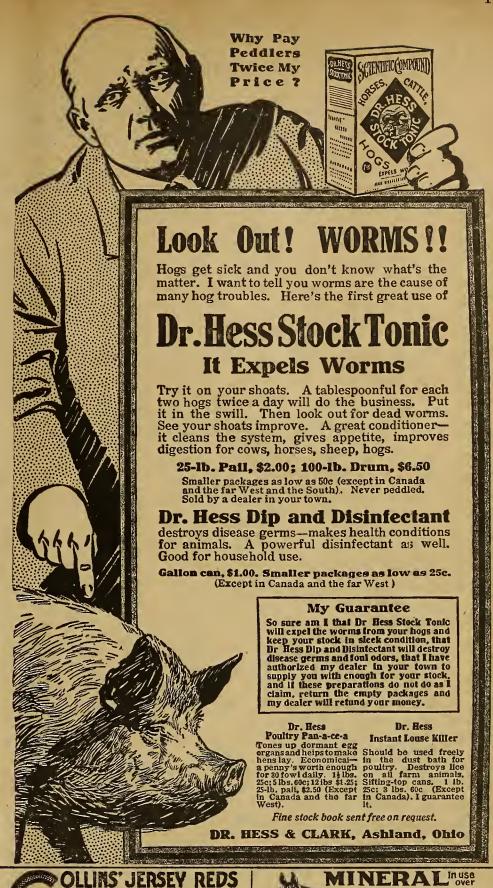
When it is necessary to examine the inner side of eyelids more minutely, draw upper lid down by the eyelashes with one hand and evert it over the tip of forefinger of the other hand.

Many forms of pronounced eye disease can be discovered in ordinary light, but where it is necessary to examine the interior of the eye for incipient disease or slight defects a more careful exami-

naton is necessary.

The interior of the eye cannot be satisfactorily examined in the sunshine or under a clear sky; grave defects can be seen under such circumstances, but for careful examination of the eyes the horse should be taken where all light from above is shut off where it falls on the eye from the front and side. The examiner standing in front will see the reflective rays from the cornea, the front of the lens and the back, and can detect any cloudiness or opacity.

The most satisfactory examination can be made in a dark room by illuminating the eye with a lamp or small electric light placed forward and outward from the eye, and moving it about. If the pupil remains closed or so tightly contracted that the interior of the eye cannot be seen, the eyelids may be rubbed with extract of belladonna, and soon the pupil will be widely dilated.







SPAVINED MULE + SAVE-The-HORSE = Profit \$300 Mr. C. B. Warner, Port Crane, N. Y., bought a team of mules cheap because one was lame. He located the trouble with "Save-The-Horse Book," treated as directed, made a com-SAVE-The-HORSE

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Dairying

A Disputed Question

By Carlton Fisher

"IN a recent issue of FARM AND FIRE-SIDE," writes a Connecticut dairy-man, "I saw the inquiry of a Virginia reader regarding his heifer being brought to milk before being bred. I have had some experience with heifers

along that line.

"While it is possible to get such a heifer with calf, she will probably abort, and after that it will be useless to breed her. Heifers of that type are freaks, and it is best to fatten them and get rid

of them as soon as you can.
"I had one two years ago that I kept a while just to see what she would do. After breeding her eight times, I got disgusted and let a butcher have her."

Here is another quite different opinion on the same matter written by an Ohio subscriber:

"I noticed an inquiry from a Virginia reader about a heifer being brought to milk before breeding. Many experienced dairymen say they can make the best cows in that way. The cow will have a calf the same as if she was not milked before. It will make no difference what-

ever.
"We had a young pet Jersey heifer that we brought to her milk before she was bred, also a small nanny goat came to her milk when but a few months old, handled the same way. The goat came fresh at eight months of age, and is still giving milk."

Weather-Proof Whitewash

"WHAT is the formula," writes a Colorado dairyman, "for cooked whitewash consisting of water, glue, and lime? I have heard that such white-

wash will not be washed off by rain."

Following is the government formula for weather-proof whitewash which is thoroughly satisfactory for buildings, fences, and similar purposes:

1. Sixty-two pounds (one bushel) quicklime, slake with 12 gallons hot water.

ter.
2. Two pounds common table salt, one pound sulphate of zinc, dissolved in two

gallons of boiling water.

3. Two gallons skimmed milk.
Pour 2 into 1, then add 3 and mix

thoroughly.

Alum added to lime whitewash prevents it from rubbing off. Use alum at the rate of one ounce to a gallon.

Sunflower Silage

THE high feeding value of sunflowers has tempted many stockmen to experiment with them, but the crop is difficult to store without becoming moldy, and the stalks are also woody and unpalatable.

A Colorado dairyman, however, reports that silage made from sunflowers is not only a great appetizer and feed but also that he can raise a crop of 30 tons an acre in fifty-five days from planting. This permits the growing of "We have found stalks at cutting time," he says, "that weighed 15 pounds each."

The Colorado Experiment Station suggests that sunflower silage has possibilities in dry-land districts, but until more is known concerning it the best method of feeding would be as a mixture with other crops ture with other crops.

Milking-Machine Tests

FIVE years of continuous experiments with milking machines are the basis for a summary of results announced by the South Dakota Station. Altogether seven different makes of machines were tested. This is, in part, what C. Larsen, who had charge of the work, says about

their use:
"Before the milking machine is installed, cull out the cows having very uneven quarters, and teats that are extremely small and extremely large. Even though the milking machines have a large range of adaptability in this respect, uniformly shaped udders and teats are advantageous.

"The cows that give only a small amount of milk and habitually release their milk little by little are not best

suited for mechanical milking.
"Breed and raise cows that are adapted to mechanical milking by, first, selecting a herd sire that comes from ancestors having good udders and teats and that milk well, or select a tried bull that is known to put good udders and teats on his daughters; secondly, by not raising the daughters of the cows that have abnormally shaped mammary organs and that are known to give down the milk irregularly."

Safety Step for Silo

By J. E. Andrews

INSTEAD of standing on a ladder which at any time may slip, I have equipped my silo with a safety step that is especially useful when I put up and take down the blower pipe. This step is on the outside of the silo, below the window in the roof.

I first took two iron brackets, size 2½x2 feet, and bolted them to the silo between the second and third hoops from the top. The brackets are about two feet apart and the long side is bolted to the silo. Then I took a piece of two-inch plank three feet long and bolted it to the top of the brackets to

stand on. Next I made a guard railing around the step. This railing is supported at the corners by iron posts, and is about three feet above the step.

Weekly Manure Disposal By D. R. Van Horn

O THE farmer who intends to build a dairy barn next spring, here is a suggestion: Try and plan it so that you will have a little extra space in which you can store the manure. Don't make it a manure pit. A manure pit serves but one purpose, and fails to do that even, in the coldest weather. The farmer in the picture hauls ma-

nure regularly every week throughout the winter. And it isn't frozen either. A corner of the shed which he is just leaving is given over to the manure. Being floored with cement, the shed is easily cleaned and does not bother the young stock in the least, as the manure is rather trashy and all excess moisture

is taken up.

Try it, if you can afford it, and then slap yourself on the back next spring when you see your neighbor buckling into a 100-ton manure pile after the frost has left the ground.

two crops a year on the same piece of

No frozen manure, no all-winter accumulation, and no manure pit. This farmer hauls it out of a cement-floored shed once a week

DUBIOUS '

About What Her Husband Would Say.

A Mich. woman tried Postum because coffee disagreed with her and her husband.

"My husband had palpitation of the heart-was unable to work and in bed

part of the time. "I had stomach trouble, and was so weak I could not attend to my housework-both of us using coffee all the time

and not realizing it was harmful. "One morning the grocer's wife said she believed coffee was the cause of our trouble and advised Postum. I took it home, rather dubious about what my husband would say-he was fond of coffee.

"But I took coffee right off the table and we haven't used any since. You should have seen the change in us and now my husband never complains of heart palpitation any more. My stomach trouble disappeared after I began Postum. My children love it and it does them good, which can't be said of coffee." Name given by Postum Co., Battle Creek, Mich.

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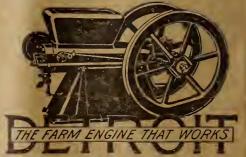


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Banding the Business Hen By B. F. W. Thorpe

PULLETS that are especially bred for laying should begin to lay from five to six months after leaving the shell. Those that begin laying under six months old are worth keeping track of throughout their pullet year. By banding the early-laying pullets with a certain kind of leg band and taking no-tice throughout the season if they are laying steadily without much broodiness until September or October, it may be sure that they are worth another leg band on the opposite leg, which indicates that they have laid a full year and did not begin to molt until they had a full year of laying to their credit. These hens will make safe breeders for the following year.

hens will make safe breeders for the following year.

The pullets that do not begin to lay until they are six or seven months old should be banded with a different band, and if they continue laying satisfactorily for eleven or twelve months after starting to lay, they too deserve a place in the breeding pen. But ordinarily these are not quite up to the standard of the early layers.

of the early layers.

The hens thus banded and that continue to do steady laying for their second and third years of production should be kept as breeders as long as they are giving a satisfactory production and keep in good physical condition.

The above rules hold good whether they posting is done continuously a

trap-nesting is done continuously, a part of each year, or whether no trapnesting at all is done.

A Year with Scrubs By Philip M. Marsh

EVER since the egg-laying contests began to emphasize the "Utility First" idea, the question of the advantage of pure-blooded poultry stock has loomed up larger on the hen horizon. Is the extra cost of the pure-bred really justified on the commercial egg farm?

My poultry work for the past year has let in some light on this matter.

From December, 1915, to June, 1916, I handled a flock of 550 pullets. Of these 65 were pure-bred Rhode Island Reds. About 335 were pure-bred Reds but of inferior parentage. The remaining 150 were crosses and combinations of almost every breed. I bought most of were crosses and combinations of almost every breed. I bought most of the stock as day-old chicks for 6 to 9 cents each as "broiler chicks," which are left-overs from the regular orders at some hatcheries. As chickens these pullets received only indifferent care, and it was not until they were in the laying houses that they got systematic attention and good treatment. When I took them in hand to make them lay I called them a cheap, poor lot—all sizes, colors, and shapes.

I took good care of these pullets, and from the middle to the last of December they began paying a profit over running

they began paying a profit over running expenses. For the first half of 1916 these pullets have averaged over 40 per cent in eggs. They averaged 48 per cent for two months. They could have done better had I prevented some comb-freezing. The income from this flock bought \$75 worth of equipment comb-freezing. The income from this flock bought \$75 worth of equipment, furnished the capital to bring into life and feed \$250 worth of chicks, and paid and feed \$250 worth of chicks, and paid a number of small bills.—I estimate that the 550 pullets have earned a profit of at least \$300, exclusive of labor. As a result of this experience I am inclined to conclude that cheap scrub stock as

pullets can be made to pay a fair return for labor and capital invested.

However, during the year, the calls for eggs for hatching and day-old chicks that I have received impressed me with the fact that I might just as well have realized considerably more money from this source. I had a few scrub cockerels for sale, but they did not bring but little more than their meat value. My opinion now is that a poultryman loses \$2 to \$5 a hundred on eggs for hatching sold, 2 cents to 10 cents a chick on day-old chicks, and \$1 to \$5 each when selling scrub cockerels to \$5 each when selling scrub cockerels and females. This greater income would be his without effort were his stock pure-bred and of a desirable strain. It is this extra profit which comes without effort from pure-bred poultry that will appeal to the good sense of thoughtful poultrymen. The extra first cost of pure-breds seems trifling in comparison with the later returns. Then, too, there has been little systematic breeding for improvement of egg production among scrubs. When buying pure-bred poultry one is paying for good breeding and uniformity in addition to their meat value. With pure-bred stock a poultryman can advance in the poultry world. With scrubs he is tied down so long as he keeps informer stock ferior stock.

Sure Recipe for Eggs

By Jane Macpherson

BEGINNERS in poultry-keeping ofsteadily when eggs are worth but 10 cents a dozen and lay only an occasional egg or loaf continually when eggs are 35 cents a dozen. I used to blame the hen, but now I know it isn't her fault.

have found that the time of year that the hens lay best is in the spring, when there is plenty of green feed and an abundance of exercise. By feeding green products in the winter and compelling them to keep in action I can best imitate nature and bring spring conditions to my hens. The question is, Does

it pay? It pays me.
Cabbage and any of the beet family are green feeds which I use profitably to feed my chickens in the winter. Greencured alfalfa and clover, which has been steamed or boiled, sprouted oats, or pumpkins have also been profitable green feeds for my chickens.

While I have found cabbage and beets the best of the foregoing winter feeds, a variety is advisable. Cabbage can prof-itably be fed when it is abundant. Beets and cabbage must be harvested before they become dry and woody, and stored in a potato cellar or buried so they will not freeze. When I feed cabbage or beets I hang them up on a nail, within reach of the chickens, or place them in a rack. My chickens will eat all of the cabbage but the core, and the beets en-

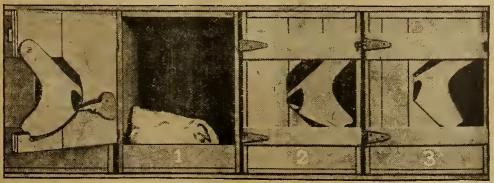
tire except the rind.

Sprouted oats can be obtained with very little trouble if one has a cellar which is kept warm enough to allow the oats to germinate. To obtain sprouted oats I soak oats overnight, then I spread them over the floor or on racks, about oats I soak oats overnight, then I spread them over the floor or on racks, about an inch deep. Soon they will sprout, the roots will intertwine, and the young plants will hang together, so that I can cut off as much as I wish to feed at a time and carry to the chickens.

In feeding green-cured alfalfa or clover which has been chopped up and boiled, I make certain that it is not moldy, as moldy feed of any kind is injurious to fowls.

Molting Hens

WHEN the hens are molting and re-covering from the molt, make sure that there are no drafts getting through cracks and crevices in the poultry house, particularly near the roof. The molting hens will stand almost any degree of cold if they are well fed and there are no drafts to strike their unprotected bodies. The foregoing recommendation holds good for all poultry, whether in molt or not. whether in molt or not.



HERE is a picture of a battery of trap-nests made use of by E. B. Shaw. The nest on the left shows a White Rock "on the job," with the door swung wide open to show the complete trap attachment. Nest number two, the trap has been locked by the hen as she entered the nest to lay. Nest number three is unoccupied and "set" ready for the next layer to enter and

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Hearts and Hazards

Flattery and Fair Words Turn a Pretty Girl's Head

By EDWIN BAIRD

PART III

HERE'S WHAT HAS ALREADY HAPPENED: Ben Abbott learns that Henkel, a confidence man, is asking Mr. Sage, Abbott's employer, to invest a large sum in a scheme to manufacture gasoline at a penny a gallon. Abbott goes to the Sage home to warn his employer, and finds the family on the porch, and Gertrude, the beautiful daughter, in animated conversation with Henkel. Abbott is in love with Gertrude, and on the following day he proposes to her. The girl, intoxicated with Henkel's flattery and his pictures of city life, tells Abbott that she hates the farm. As he leaves, he sees Henkel coming, and the two exchange angry words. Henkel is not able to persuade Sage to invest in his scheme, and tries to get Gertrude's help in influencing her father.

ERTRUDE, dressing for a lawn party, paused in her happy employment when the mellow hon-n-k of a motor siren floated up to her room from the street below. Eyes shining, she ran to the open windows which gave upon the front yard, and there beheld Henkel coming toward the house

ward the house.

She hurried thereafter, and in less than ten minutes she appeared before him on the veranda. She looked entrancingly well-appareled, and young and beautiful; and Henkel said so. Here lay a secret of his success with her: he said things which other men

his success with her: he said things which other men merely thought.

It was apparent now, however, that Henkel was in no mood for sustained flattery, and she, observing this, said with a touch of coquettish resentment:

"I don't believe you're the least bit glad to see me. You don't act as if you were."

He smiled at her in a rather haggard fashion.

"I'm always glad to see you," he said, with a caressing emphasis on the pronoun. "If I seem a little preoccupied to-day it's because I—because I'm feeling so blue."

Her liquid eyes filled with sympathy.

Her liquid eyes filled with sympathy.
"You poor man! I wish I could cheer you up.
Hasn't your business deal gone well?"
He wagged his head sadly and again contorted his

lips in a smile.

"It's gone too well, I fear. It's gone entirely."

"Then Papa—hasn't invested?"

"No. He wrote to some of my friends in Chicagoat least, I think he did—and because they weren't there to vouch for me—" Henkel ended the sentence with a shrug.

"Why, how perfectly unjust! I didn't know Papa could be so narrow." She looked at him compassionately as he sat, sidewise, on the veranda railing, gazing moodily down at the hot, dusty street, and she gazing moodily down at the not, dusty street, and she thought how noble and honest he was, and how grievously mistreated! "It's a shame," she protested, thinking aloud. "And you've tried so hard to make his fortune!" She took a quick step toward him. "I wish I could help you. Do you suppose I could?" He looked_around at her dismally.

"I'm afraid not. At any rate, not unless—"

"Yes?" she encouraged, as he paused.
"Unless what?"

"I was about to suggest that you invest some of your own money—and thereby make a great deal more."

"How I wish I could! But I haven't any money of my own, Mr. Henkel—only a small annuity. I might contrive to get a hundred dollars, or maybe two hundred, and if you'd be willing to accept that—"

"No," he smiled. "It would have to be at least a thousand. But I see you are going out and I'm detaining you."
He got to his feet, glancing at his watch.

He got to his feet, glancing at his watch. "My car's below and at your disposal. won't you let me take you to your destination?"

HENKEL made that drive a long one, and of his time he made profitable use. When Gertrude alighted at the lawn party her mind was busied with a thought which clung therein all afternoon, and which, that evening, attained utterance. Sitting on the veranda with her father and mother she spoke at some length, and since she spoke in a complex way, neither immediately understood her. When finally they perceived her meaning, both stared at her in utter

"But what on earth," exclaimed her father, "do you want with a thousand dollars cash?"

Gertrude lowered her eyes. She remembered very well what Henkel had told her—"Tell them you want it for a foreign mission society"—but somehow the words stuck in her throat. The silence lengthened. At last, without

looking up, she murmured: "I want to give it away."

The fading light was kind to Gertrude. Neither of her parents saw that

her face was scarlet.
"Give it away to whom, dear?" asked

her mother.

"To-to charity," whispered Gertrude, swallowing

hard.
"Which charity, dear?"
"The c-church, I suppose."
"You 'suppose'?" repeated her mother, much puzzled. "Don't you know?"
"Of course I do, Mama—you see—I only meant— "Of course I do, Mama—you see—I only meant—I—I—" Gertrude came to a dead stop. Her fingers were twisting together in her lap, and she was gazing at them. Her tongue felt dry. The thing wasn't developing at all as she had expected.

Another miserable pause ensued. Her father, who had been watching her silently, keenly too, for several minutes, ended it abruptly with a wholly unlooked-for question:

question:
"Was Henkel here to-day?"

Gertrude looked up, then down again, moistened her lips, started to speak, and allowed a nod to suffice. "Yes, he was here," said Mrs. Sage to her husband. "He took Gertrude motoring."

Mr. Sage bent his gaze upon his daughter; it was a gentle gaze, full of kindly wisdom.

"What did you find to talk about?" he asked.

"I—I—we—we didn't go far—only to the Darrows'—so of course we didn't talk much about anything—much—" Gertrude, hopelessly entangled, lifted her eyes appealingly, and met her father's gaze. And she saw now that he knew.

SHE contrived, somehow, to get out of her chair, and, covering her face with her hands, she fled to

Sage and his wife exchanged glances through the

Attaining her room, Gertrude locked the door and flung herself face downward on the bed in a whirlwind of grief. For an indeterminate period she lay here in the darkness, sobbing heartbrokenly. She had no coherent thought—only the confused consciousness that her parents knew she had lied. Several times, indeed, her mind dwelt on Henkel, but this led nowhere. All concern for him was drowned in her own chaotic self-pity. She had lied for him, and her parents knew she had lied!

She descended to breakfast next morning only when she knew her father was out of the house. But she could not thus easily avoid him at the evening meal, and it was immediately clear to her that she was doomed for an unpleasant period with him. Her mother's demeanor too, throughout this day, had implied he would "have a talk with her" to-night.

His first words, however, when they were alone in the library, were a total surprise:

"Gertrude, Ben Abbott and I had a lengthy chat to-day about something which I think will interest you. D'you know, I've a great admiration for that wind of grief. For an indeterminate period she lay

young man; he's the most honest person I think I ever knew. He's leaving my employ, by the way, the first of September. Going back to the farm. It'll be a real loss, a real sorrow too—for me." Sage paused to relight his cigar.

Gertrude's perplexity grew. What in the world had Ben Abbott to do with Henkel?
"Is that what you talked about, Dad—his return to the farm?"

"No," said Sage, waving the lighted match to and fro to extinguish it—"we talked about Presley Henkel. For some reason—intuition, maybe—I've had an idea that Ben knew more about this Henkel than he cared to divulge, and I understood his nature well enough to know that he wouldn't divulge it unless cared to divulge, and I understood his nature well enough to know that he wouldn't divulge it unless coerced through his honesty. So to-day, just to prove my conviction, I told him I'd decided to invest five thousand dollars in Henkel's gasoline scheme. Then he told me what he knew. And what do you suppose he told me?"

"I can't imagine," she murmured, watching her father steadily.

"Why, he told me that one time, when he visited Chicago, Henkel tried to entice him into a wiretapping game. Perhaps I'd better explain what that means: it's an old-time fraud, and when Henkel picked Ben for a sucker—"

"I don't believe a word of it!" she interrupted sharply, and her eyes flashed with anger. "I'll tell you why. Ben Abbott came over here Sunday afternoon to ask me to marry him. He saw there wasn't any hope, and just as he was leaving he met Mr. Henkel. I saw them talking together at the gate. Mr. Henkel was coming to see me, and Ben knew it, and—there you are! There's not one word of truth in what Ben says. It's nothing but jealousy talking."

"You're mistaken, my girl. I'd stake everything I own on Ben's integrity, and I know he's telling the truth. Besides, I've distrusted this Henkel from the start. He claimed to know some wealthy people in Chicago, and I wrote to them—"

"And just because they happened to be out of town you decided he was an impostor. Really, Papa, I'm

"And just because they happened to be out of town "And just because they happened to be out of town you decided he was an impostor. Really, Papa, I'm ashamed of you. And, anyway," continued Gertrude, trembling with rage, "you couldn't turn me against him, no matter what you might say. I still believe in him, and I shall continue to see him just as often as I wish." Still quivering, and trying to conceal it, she rose and left the room.

HER father sat staring thoughtfully at the rug and drawing on his cigar in deep meditation. He

I and drawing on his cigar in deep meditation. He looked up as his wife entered the room.

"You heard, Mother?"

She nodded gravely. Her eyes were very troubled.

"What shall we do, Frank? I'm afraid—"

"You needn't be, Mother. Everything's all right. She won't see him again. I'll arrange that to-morrow."

Toward ten o'clock on the following morning Mr. Presley Henkel sat in his room at the Jefferson Hotel, conversing with a black-haired, furtive-eyed genwith a black-haired, furtive-eyed gen-tleman of quiet persuasion. Perhaps it is more accurate to say that Mr. Henkel

reclined, for he was not yet out of bed. While speaking, he quaffed languidly of a Scotch highball, and it was to be observed that his present speech bore no resemblance to that which Gertrude Sage was accustomed to hear from his

"Lucky thing you blew in to-day, Blackie. I'm in a nasty stew, and it's up to you to thin it. This rich old fink is layin' down on me, and you've no idea how the game's gummed up. He's got a guy workin' for 'im—a hick named Abbott—who might crab it too, any min-ute."

"But what's my lay?" queried Black-teetering on the hind legs of his

Henkel drained the remainder of his highball and placed the empty glass on a table beside his bed; he then lit a cigarette and inhaled of it liberally. "Here's the dope—" he started to explain, but the telephone interrupted him. "Answer it, Blackie."

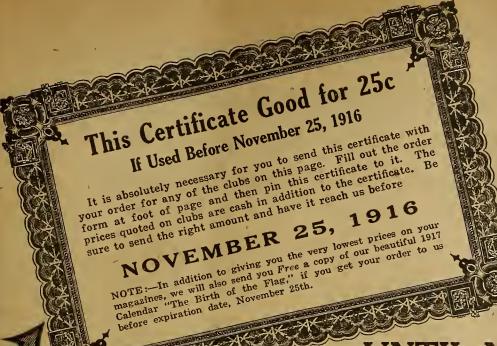
Blackie obediently trotted to the telephone, ringing lustily, and unhooked the receiver. "Hello?" said he... "Oh!
... Oh, yes!" Covering the transmitter with his hand, he whispered over his shoulder to the man in bed: "It's

mitter with his hand, he whispered over his shoulder to the man in bed: "It's him—our boob. What'll I tell 'im?"

"Tell 'im— No, wait. I'll buzz 'im myself." Henkel sent the bedclothes flying as he sprang lightly to the floor. In another moment he was speaking suavely at the telephone: "Ah, good morning, Mr. Sage! This is an unexpected pleas— What's that? . . . See you this morning? Delighted, I assure you. I shall come right over. I suppose, Mr. Sage, [CONTINUED ON PAGE 27]



"Miss Gertrude," reported the maid hesitatingly, "is not at home"



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October 1916

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OUR 1917 CALENDAR

We have a pleasant surprise for our FARM AND FIRESIDE Family this year. We have steered away from the usual style of calendar and have picked something that is very much in keeping with the times. With war clouds all around us, our troops in Mexico and on her borders, and the martial spirit in the atmosphere everywhere, what could he more appropriate than the subject we have picked—"THE BIRTH OF THE FLAG"? This beautiful picture shows the making of the original "Old Glory" in the little sewing room of the revered Betsy Ross—the delicate colors of the original painting are faithfully reproduced. The picture is mounted on a handsome green-gray background which sets it off to the hest advantage. The calendar pad is large and easily read. You will certainly want a copy of this masterpiece of the printer's art.

The Calendar is not outer ready for distribution yet, but we will

The Calendar is not quite ready for distribution yet, but we will put your name on list and send your copy if your order reaches us before November 10th.

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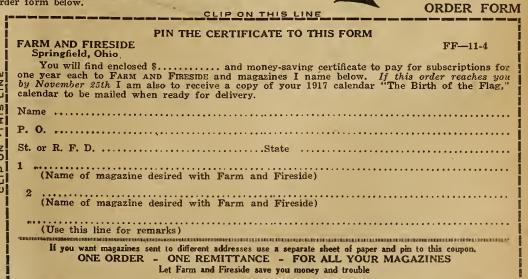
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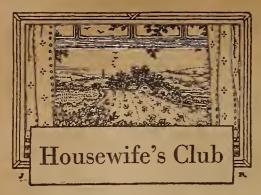


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A First-Aid Box

By Jane Macpherson

HAVE an emergency box on which I can depend in case of accident. Accidents on our farm, while trivial, have been numerous. In handling the ma-chinery or working with the live stock, some member of the family or the help often receives a cut or a bruise which will prove of little consequence if given immediate treatment, but if not thoroughly cleansed and bandaged, the innocent-looking little wound may cause the sacrifice of a limb or a life from blood-

My emergency box contains several bottles of antiseptic solutions and a number of bandage rolls of various widths. With these I can do the few simple precautions which often mean so much before the doctor arrives.

Antiseptic bandages may be bought in different widths at small cost from any drug store, or they may be made from an old sheet, bleached cloth being the best. The sheet must be clean. It should be torn in strips at least two yards long and in these widths: 1 inch, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3, and 4 inches. I made two or three strips of every size. The narrower bandages are the most useful. I made a tight roll of each strip and put them away in a box out of the dust. I also have a box of absorbent cotton and a few pieces of cloth about 12 inches

An antiseptic is a solution that kills germs, and germs cause a large part of the trouble in wounds. Carbolic acid probably is the best general antiseptic. get the strong carbolic acid from the druggist and use a teaspoonful of it in a quart of water. This is a safe strength for any part of the body except the eye. If any of the pure acid is accidentally spilled on the hand, I put pure alcohol on the place at once; this neutralizes the effect of the acid. A number of patent antisentic solutions are sold and ent antiseptic solutions are sold, and are very good to have in the emergency box. These preparations lose strength on standing in the light.

A good way to dress an ordinary small wound is to make a solution of carbolic—a teaspoonful to a quart of warm water—and, using some absorbent cotton, wash the wound thoroughly, taking care that the antiseptic penetrates every part, and that all dirt is washed

out.

If it is a hand or finger that is injured, I soak the injured part in the solution for a few minutes. This generally stops most of the bleeding. Then I soak a piece of clean cloth in the acid solution, squeeze it fairly dry, and wrap it around the injured part using three solution, squeeze it fairly dry, and wrap it around the injured part, using three or four layers. Then I select a bandage of suitable width and apply it neatly. I fasten it by pinning with a safety pin, or by ripping the bandage down the middle for several inches and, crossing these ends, use them as strings to tie on the bandage. If the wound bleeds very much I put some dry absorbent cotton over the moist cloth, applying the bandage over all. age over all.

Making and Preserving Cider

By E. L. Wood

IN ADDITION to the jams, jellies, etc., that are made up of overripe apples, a superior grade of cider can be made and put up and kept sweet for an indefinite period. Of course, the unfermented apple juice is that in which no changes caused by the yeast plant have taken place. On all fruits the yeast plant is found very generally distributed and belongs to the same low order of plants as the yeast used in bread-making. It grows quickly in fruit juices, changing the juice into alcohol. In other words, fermentation begins. One of the most important features then in making sweet cider is to kill these organisms so as to prevent fermentation.

This can be done in two ways: first, by the use of chemicals; and, second, by the application of sufficient heat to de-stroy the organisms. The first-named method cannot be recommended, for then the liquid is adulterated, is inferior in quality and unfit for human consumption. The latter-named method is the one to follow.

In making and preserving a first-class

fruit will become a bright clear liquid, while that made from unripe apples will not become clear, neither will it possess the pleasant flavor which is so characteristic of the product obtained from fully matured and well-ripened fruit.

It is quite essential that the press and utensile used in making the eider he as

utensils used in making the cider be as clean as possible. Also the bottles or other containers into which the liquid is kept must be thoroughly sterilized before the product is received by them. As soon as possible after the juice has been extracted from the fruit, it is well strained and put into a suitable vessel such as a clean new tin wash boiler or granite-covered metal kettle, and gradually heated to a temperature of 185 degrees Fahrenheit. While being brought to this temperature, all scum that accumulates must be removed. It is a practice with some to allow the juice to remain heated 185 degrees for fifteen or twenty minutes. In my experience, however, I find this unnecessary. It is very important, though, not to allow the temperature to go above 185 degrees, as the cider would then have a cooked taste and be unpalatable. The cider will keep if it is heated only to 175 degrees, but a temperature of 185 degrees is better.

As soon as the thermometer shows strained and put into a suitable vessel

As soon as the thermometer shows that the proper temperature has been reached, the cider is poured into the sterilized receptacles and securely sealed. It is a good plan to use a little paraffin, as this will insure that no air is admitted, which, if it finds its way into the liquid, will finally cause fermentation and spoil the cider for the purpose for which it is made.

Clothing Price Inquiry By N. M. Ellis

IN TIMES of prosperity, prices seem to have the habit of increasing, and the Furthermore, regardless of the amount of the increase, a logical explanation is usually forthcoming to convince the public that profits on the goods are no more than usual. The cost of wearing apparel was expected to increase as soon as the European war broke out, but the low price of cotton at that time, the uncertainty as to the duration of the war, and the stocks of raw material on hand all assisted in keeping prices about nor-

creased, which nearly always occurs in times of prosperity.

Silk plush, which is used to a large extent for coats, is a specialized English industry. That country has perfected the spinning of the tussah silk yarn used as the basis for silk plush. Now, finding that this kind of silk is especially adapted for gunpowder bags, England adapted for gunpowder bags, England permits only small shipments of the silk to the United States, and the price has advanced upwards of \$1.25 a yard.

Cotton is to-day bringing nearly double the price of a little over a year ago. We are supplying a greater proportion of the world's demand than formerly. Besides, enormous quantities of cotton are used in the manufacture of explosives, notably guncotton.

Dyestuffs have increased in price to fabulous figures, certain dyes having increased over 5,000 per cent. One pound of dye is required for about one hundreds yards of cloth, which makes the coloring of cloth a considerable item in the cost of manufacture.

Finally, as everyone knows, the cost of labor has increased. The only relief in sight is the close of the war in Europe and the return of the armies to peaceful occupations.

Housewife's Letter Box

To CLEAN WHITE FUR—Heat a generous quantity of new bran in a pan, stirring constantly until well heated. Rub into the fur, repeating at least three times, keeping the bran as hot as can be handled while using. Shake the fur and brush briskly, and when the bran is removed the dust and dirt will have vanished. S. R. O., Minnesota.

To CLEAN IVORY—Scrub ivory well in hot soap and water, and while still wet with the suds place in the sunshine. Repeat several times a day for four days, then wash again and your ivory will be perfectly white. R. E. M., Arizona.

An Idea in Pressing—When I wish to press either a silk or wool garment which cannot be sprinkled or wrapped in a wet coth, I hang it in a cellar for a few hours. It will gather just enough dampness to press easily, and will look delightfully fresh again. J. M., Ohio.

Nancy York Edgings



TUST the lace for a fine handkerchief or a set of collar and cuffs or, worked in coarser thread, either edging will be suitable for table runners, linens, towel ends, etc. For complete directions send four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio.

This year, however, the accumulative peared, and the number of factors tending toward an increase have become larger and more numerous.

Some retail stores have abandoned the customary practice of holding a fall sale. Rather than cut prices on such goods they prefer to let them move slowly at a profit, thus obviating a marked increase of prices on the new goods.

An investigation of the wholesale end

of the business brings to light these

Woolens have advanced (1) because England has placed an embargo on wool, which prevents its importation from Australia and New Zealand; (2) the belligerent countries are demanding and using enormous quantites of woolens for their fighting forces; (3) the quantity of woolen rags returned to the mills for sterilization and remanufacture into low-grade short-fibered garments is much less than usual. Woolen garments, blankets, socks, and other materials used in the war zone are practically a total loss since they are either buried with the soldiers, burned, or cast aside.

Silks have advanced because of the in-In making and preserving a first-class ferior crop in Japan and stoppage of article, only sound, well-ripened fruit exportations from France and Italy, should be used. The juice from ripe also because the local demand has in-

To PREPARE CITRON—When using citeffects of the last two years are begin-ning to be felt, since all factors that might keep prices down have disap-run them through the food chopper. The work is easily and quickly done in this way, while the old manner of preparing requires time, labor, and patience.
L. G. C., Massachusetts.

A USEFUL ARTICLE—A home-made stool, one side of which is a stepladder, is one of the best conveniences in my kitchen.

M. K., Montana.

TO KEEP MILK FROM SCORCHING Pour boiling water into a pan and let boil for a minute, turn out and immediately turn in your cold milk. This simple precaution will prevent milk from ever scorching. M.M.McC., Michigan.

SMOOTH TABLE LINEN—Fine table-cloths keep in much better condition and make a better appearance on the table if they are ironed with one central fold and then rolled instead of folded. Rolls for the purpose may be purchased, or they may be made by rolling together many thicknesses of paner.

E. H. W., Oregon.

SMOOTH GRAVY—If gravy is lumpy, try beating it with an egg beater. It will come out creamy and smooth. L. P., Illinois.

Good Health Talks

By DR. DAVID E. SPAHR



An Ascending Neuritis

E. L. M. of Vir-ginia sends a description of the following case, which she says is puzzling the doc-tors out that way, and wants us to give our opinion through these col-

"A man about 68 years old met with an accident by which he nearly cut his thumb off. There being no doctor near, his son put in several stitches and dressed the wound, which healed up nicely, but later he supposed that he had frozen his hand and thumb. And from that time on it seemingly burned and hurt and pained him so that it became almost unbearable. He then went to the hospital and had the thumb taken off

Later it seemed that the same trouble again started up. It had again healed up nicely. The only thing that is noticeable is a redness occasionally where the incision was made to remov the thumb, and after a spell of painfulness there is also some soreness and a little swelling. But the swelling is very

slight.
"He also now complains that his arm pains up to his shoulder, also burns a good deal of the time. Lately he has spells that he is out of his mind, and has made one attempt to commit suicide by taking formalin. He still says he will kill himself, and his mind is bad by spells. He also wants his arm taken of but his relatives and friends think differently, and are trying to prevent it It has been about ten months since the accident. He has had spells of feverishness when his hand and arm are so painful and burning. The doctor thinks that it is a mind trouble, and that he simply has his mind centered on his trouble."

trouble."

This man has an ascending neuritis or inflammation of the nerve. In this case it is, in all probability, caused by injury to the nerve at the time of the accident. An inflammation of the nerve would travel slowly along the course of the nerve to the shoulder and spine and then to the brain. If there is anything that would cause a man to lose his mind and commit suicide, it is this very thing. If it isn't too late, a specialist might dissect the nerve entirely out, as far as the inflammation extends. Have far as the inflammation extends. Have him examined by a competent nerve specialist. Such things do happen after an amputation. My opinion, and it is only an opinion after all, is that his pain is real, although he may be of a neurotic temperament.

Mistaken Diagnosis .

Does it shorten a person's life to have the appendix removed? Five years ago I was operated on for appendicitis, or what the doctors thought was that, but it proved to be gall stones instead. They removed a healthy appendix, and performed an operation for gall stones, removing 140 or more. Is there any connection between the two? I have read that the suffering was somewhat similar. What can I do to prevent their forming again? A talk on gall stones would be appreciated.

A Subscriber, Idaho. A Subscriber, Idaho.

WHILE I have no statistics at hand VV to guide me, it occurs to me that it is not the one that has been removed but the one that has been retained that threatens the life. It is sometimes a very difficult matter to differentiate between an appendicle trouble and disease of the gall bladder. It is not the first mistake of the kind. However, it seems to be a good or lucky thing for you, as you got two operations for the pain and expense of one.

Gall stones are not liable to recur if you are careful of your diet and drink plenty of alkaline water.

Purpura Hemorrhagica

I am a man thirty years of age, and have a couple of red spots the size of your hand on each leg. They are not watery, but irritable and red or pimply. Have been there about six months. Can you give the cause and cure? E. H., Kansas.

PURPURA HEMORRHAGICA is due to infection—intestinal putrefaction d toxemia. Yours is probably the

rheumatic variety.

The treatment is attention to the mode of life, plenty of fresh air, and good food and active bowels. Dilute hydrochloric acid in five-drop doses in sweetened water before meals.

Ready-Cut Houses

[CONTINUED FROM PAGE 18]

the advantages outlined, there are some important things to watch if you expect to be thoroughly satisfied.

Every home that is built nowadays, either in city of country, should have modern plumbing even though it is simple. This requires a sail nine placed so ple. This requires a soil pipe placed so the waste from kitchen, bathroom, and laundry may be drained into it and car-ried away in a suitable sewer. Consequently the house must be planned to provide for this, and the position of the soil pipe in the house must be decided on, as a four-inch soil pipe requires a six-inch partition to give plenty of room for the hubs of the pipe. Most parti-tions are four-inch. If you fail to make this provision and later decide to install plumbing, the soil pipe and connections will have to run through a room or closet where they will take up room and be unsightly as well as requiring con-

siderable tearing up at the time.

In a similar way, the location of fireplaces and flues should be planned in
advance. The advantages of electricity as a household servant as well as for lighting purposes suggest the advisability of having the house wired, and this can be done best and at least expense when the house is being built. pense when the house is being built. The same applies to piping for gas or acetylene. Furnaces which will heat the entire house may now be purchased for close to the price of two good stoves, and they not only keep the dirt and ashes in the cellar but save work in carrying coal, and also keep the floors warm. But have the cellar high enough—at least 7 feet 6 inches in the clear.

A few styles of furnaces may be installed after the house is completed, but stated after the house is completed, but it is best to decide on the heating system before building. While all this planning may seem to involve considerable responsibility, it is not difficult. With a ready-cut house you have the complete plans before you, and concerns selling the houses will give full particulars about the arrangement of fixtures of all kinds. Several ready-cut house comkinds. Several ready-cut house com-panies supply complete heating, lighting, and plumbing equipment for their houses, and, if desired, even furniture.

But it should not be assumed that even an experienced architect in draw-

ing up specifications for a house built in the old way will cover all details. For instance, in the matter of electric wir-ing, either the architect or the owner usually goes through the house with the electrician and points out where the lights are to be placed. The electrician then makes a few recommendations which are based on past experience, and half the fixtures may be placed somewhere else where they will give better light, or be more accessible when you enter the door.

If the electrician is first class he will urge the owner to have a small light in each large closet, and anyone who refuses to accept this suggestion will re-

One amateur builder who had thought the matter of electric wiring over several weeks in advance made a sketch showing just where every fixture was to be. His wife had also agreed that every fixture was in just the right place. The electrician could not improve on the plan and said that it was the first time in his experience that any of his customers knew exactly what they wanted. Incidentally the plan saved him so much time, that he voluntarily added a few extras in convenient switches without charge.

As to matter of cost and method of selling, most ready-cut houses are cash propositions, but they are sometimes financed through local building and loan associations. On an average, the material furnished for a house with six rooms and bath sells for somewhat less than \$1,000, and several five-room houses are quoted at less than \$500. Considering the quality of material, these prices are surprisingly low, and are explained chiefly by the fact that this is simply another case where ma-chinery and a large volume of business reduces costs

The unskilled home builder should, however, be careful not to select too small a house. When a home can be secured in the old way on the basis of a small payment down and the balance in monthly or wearly installments over a monthly or yearly installments over a term of years, the average investor is more likely to get one that is adequate for his present and future needs even though the quality may not be so good.

But in buying a house for a lump sum there is a tendency toward a cheaper investment. One family, for instance, was on the verge of selecting a five-room house, but finally decided to pay \$400 more and get a much larger one with six rooms and considerably more closet space.

This six-room house is barely large enough for the family's present needs. "If we had bought [CONTINUED ON PAGE 26]











Carnegie, but you are neither there is no reason why you should work for nothing. You've got as much brains as Walter Murray and he makes \$200 a month. No, John, I will not go in debt. We can't be married more money." till you make more money.

The ambitious young lady who delivered this ultimatum didn't use those words exactly, but she used those thoughts exactly. And when she paid a visit to this office last week with her husband (for she is now Mrs. John McDermott) it was a pleasure to hear her husband tell how he won a wife by marking the coupon. John McDermott of Ohio became one of our special agents just three months ago. During September he broke his previous high record and made \$568 net.

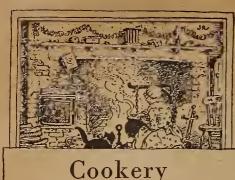
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Cookery

Preparing Delicious Hams

By Marie D. Hunter

HAVE had so many favorable criticisms of my cooked hams in the past two years that I think my method of curing and cooking must be different from other people's. For the benefit of those who want to make sure of delicious meat, I will give them my whole process from the time of killing. When the joints are cut out and trimmed, have in place one-half gallon of molasses, one peck of salt, and four ounces of salt-peter for every dozen joints. I treat the shoulders the same as hams, and find no difference in them when cooked.

With my hands I spread the molasses in a thick coat on the under side of the joint where there is no skin, and at the butt ends. After mixing the salt and saltpeter thoroughly a thin coat of that is applied, until two thirds of the mixture is used. The joints are put in a clean box, skin side down, and allowed to remain two weeks, when they are taken out and the remainder of the mixture applied. They are returned to the box and left for a month, after which time they are ready to hang in the meat house and cure. Before the flies come, apply a little borax and black pepper, wrap in paper securely, sew in cotton bags, and hang in a cool, dry place.

When ready to use, soak in cold water for a few hours, boil slowly in plenty of water until the joint can be boned. Take off the skin, cover with a thick coat of brown sugar and powdered allspice, bake in a hot oven until brown. Allow to cool, and begin to carve at the tip end. Not a morsel will be lost. Do not imagine that these directions call for too little salt. Meat does not need very much, as is generally supposed. Too much causes them to become hard and

Making Good Bread

By Jane Macpherson

BECAUSE it is difficult to maintain the proper temperature, winter is the poorest season of the year for suc-cessful bread-making. The temperature of the dough should range between 70 and 90 degrees, depending on the season. The dough should be kept at 70 degrees in summer and 90 degrees in winter.

Heavy bread is caused by unfavorable temperature, old yeast, or the use of poor flour—that is, flour which does not contain the proper amount of gluten. Keep the temperature below 45 degrees and the action of the yeast will be re-tarded until a higher temperature is maintained. Continued low temperature means heavy bread. Coarse bread is caused by insufficient kneading. Too much working makes lighter and whiter bread, but impairs the flavor. The flavor is also influenced by the cleanliness of the utensils used.

Good dough is often spoiled in the baking. Individual pans should be used to insure thorough baking. A hot oven is necessary at first to form the crust, and then the temperature is gradually diminished. The ideal crust is from one sixteenth to one eighth of an inch in

thickness. According to tests, forty-five minutes has proved sufficient for a small loaf, and one hour for a large one.

The care of the loaf after baking has much to do with the maintenance of its texture and flavor. If put away while warm or moist, molds will form. The loaf should be cooled in a current of air and kept in a tin or earthenware jar.

Recipes

VEGETABLE SOUP-Take a marrow soup bone and put into a kettle with three quarts of cold water. Cut one and one-half cupfuls of cabbage very fine, grate two good-sized carrots, and add with a little parsley to water. Let this boil two and one-half hours, or until the meat is tender, adding more boiling water as the soup boils away, so as to have three quarts when finished. Add one pint of tomatoes, salt and pepper to taste. Before serving, add egg noodles, made as follows: One cupful of flour; into this break one egg, and work it into the flour until it forms a dough. Roll

as thin as possible, flour well, and roll in a roll. Take a sharp knife and cut the noodles about an eighth of an inch wide; shake out, flour well, and drop into boiling soup. Let boil ten minutes. Then add a little flour and water thickening to the soup; serve. Mrs. A. W. B., Nevada.

VEAL BIRDS-One and one-half pounds of veal steak, one-fourth pound of salt pork, three tablespoonfuls of cracker crumbs, two tablespoonfuls of melted butter, one-half cupful of cream, salt, pepper, dash of cayenne, lemon juice, onion juice; cut veal into pieces for individual serving, and grind the scraps left with the salt pork. Add crumbs, cream and butter; season highly. Add hot water to mix. Spread on pieces of veal; roll and fasten with toothpicks. Sear in hot butter, add boiling water and simmer one and one-half hours.

F. L. D., Ohio.

BAKED PEACHES—Peaches are dencious baked in the same manner as apples. Peel the fruit, add sugar, cinnamon if desired, and chopped walnuts. The bottom of the pan should be covered with hot water, and a little butter may be used.

E. S., Maryland. BAKED PEACHES-Peaches are deli-

FRIED CÜCUMBERS-Peel and thinly slice lengthwise medium-sized green cucumbers and put in salt water for two hours. Roll in flour or corn meal and fry in either butter or lard until nicely browned. Serve hot. These are also good in sandwiches. R. M., Indiana.

OATMEAL COOKIES-One-half cupful of butter, one-half cupful of lard, onehalf cupful of sweet milk, one cupful of sugar, two cupfuls of flour, two eggs, one cupful of oats, one cupful of raisins, one cupful of chopped nuts, one teaspoonful of cinnamon, one teaspoonful of cloves, three-fourths teaspoonful of soda in water, pinch of salt. Cream butter, lard, and sugar; add the eggs, well beaten. Add milk, and mix well. Sift and add the flour. Then add oats, raisins, spices, salt, nuts, and the soda dissolved in a little water. Beat well, and drop onto buttered and floured tins. Bake in a moderate oven. L. M., Kan.

Ready-Cut Houses

[CONTINUED FROM PAGE 25]

the smaller house it would have been money thrown away," this man told me the other day. "If anything we should have bought a still larger house."

Inexperienced builders will also do

well to compare the size of rooms given in the plans of ready-cut houses with rooms in which they have already lived. A bedroom measuring 9x12 feet is just a comfortable size for a double bed, dresser, and two chairs. But in some of the less expensive houses the bedrooms are as small as 7x10 feet. In a similar way a bathroom will not accommodate the usual fixtures without crowding if it is less than 6x8 feet. Nevertheless, bathrooms as small as 5x6 feet are specified in some plans. The smallest size for a comfortable kitchen that will allow room for stove, sink, cabinet, ironing board, and storage for supplies is about 10x10 feet, or 100 square feet of floor space. Consequently it is best to think twice before asking your wife to attempt to prepare meals in a kitchen that has less than 70 square feet of floor space and no pantry. Some of the houses are so designed that hallways and storage places have been sacrificed to make the rooms larger. Consequently the housewife has no place for her linens, bedding, and the many supplies which are needed only occasionally, but which should be convenient when they are needed.

On the other hand, ready-cut houses selling in the \$2,000 class compare favorably with the average \$4,000 completed home. The rooms are spacious and there are vestibules, large closets, wide hallways storage places hallowies. wide hallways, storage places, balconies, and sleeping porches.

The person contemplating the construction of a ready-cut house has several hundred different styles and sizes to choose from, and has the privilege in many cases to modify plans to meet his special requirements.

Briefly, the plan of building a house from lumber already cut to fit, and with complete millwork and hardware, has numerous advantages, particularly in localities where the selection of materials is limited and skilled labor is hard to secure. The chief caution is to study the plans carefully and not be influenced by an unusually low price to purchase a building which falls short of your requirements.

EDITORIAL NOTE: If you have any questions about ready-cut houses, barns, garages, or building equipment of any kind, address the Home-Building Editor, FARM AND FIRESIDE, Springfield, Ohio. Information will be given free of charge and by personal letter.

Selling Fruit by Auction

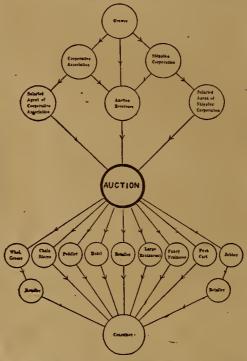
By Julian A. Dimock

WHAT happens to the average bar-VV rel of apples raised in New England to-day? Isn't it shipped to a commission house in Boston or Lowell, Providence, or Springfield? Does the average shipper know anything about the house to which he ships, or has he any real information concerning the destiny of his fruit? Has he looked into the facilities of the house for connecting with buyers, or seen the market conditions in the territory reached by them?

The small grower of apples cannot afford the time to look personally into the marketing of his crop in the far-away city. He must trust to agents often unknown to him, and receive re-ports of sales without the possibility of proof concerning their genuineness.

When Farmer Jones sends a few bar-

rels of apples to a commission house in the city to be disposed of at private sale, he is inviting trouble, in his mind. He does not realize that his product is not as good as that of some famous orchard. His trees have not, received the same careful attention; the power sprayer is probably unknown in his orchard; thinning of the fruit he regards as a waste of time, while he does not know how to pick and pack apples as these things are done by specialists.



This diagram shows the direct route to retailer and consumer, possible by auction selling

He thinks that he himself can pack apples as well as necessary, and sort and grade them as well. He does not know that the owner of the big orchard making a specialty of fruit dares not trust his own ideas of packing, but hires expert men to do the work for him. So, when the small grower reads that the specialist's apples sold for \$5 a barrel on the same day that his were reported as going for \$1.75, he is naturally disgruntled and talks about commission men who rob the farmer.

If the fruit of growers who do not specialize were put up at public auction and sold at the same time with the specialist's brand, it would be difficult for the small grower to hold to his theory of dishonesty if his fruit brought less than half the price paid for that from the celebrated orchard. He would be thrown right back on the fact that expert buyers appraised his fruit at about one third the value of the apples of the specialist. He would understand exactly where he stood, and could figure out the value of proper care of his or-chard. This would be one of the benefits to be received from the public auction-

ing of apples.

It is easy to understand that the commission man has not the same opportunity that is possessed by the auctioneer. The auction house in Boston sells from 40 to 60 cars of fruit a day, while in New York much larger amounts are handled. Such a lot of fruit calls together all the prominent buyers and every man looking for bargains. The buyer of the big wholesale house is sure to be there, the Greek who runs a push-cart and wants to pick up a few boxes of second-grade stuff is on hand to pick up the crumbs that fall from the table of the big buyers. But there is no such gathering of buyers at the commission man's with his small supply of fruit and limited selection. The purchasers already know the prices ruling at the auction, and they are unlikely to pay a higher price at private sale. The seller will lose nine times out of ten.

This opportunity awaits the farmer. The auction house in Boston sells from

This opportunity awaits the farmer. It is not a proposed method for which he must wait an indefinite period. He can send his very next crop of apples to an auction house which has been in the business for half a century, in any one

of many large cities. His regular com-mission house will sell his crop through these auction houses if he so desires, or he can employ an auction broker. Many of the auction houses do not receive direct consignments. These brokers attend the sales and can withdraw the offering if the price is not satisfactory. They receive and forward the check from the auctioneers to the shipper, sending therewith a published list of all sales on the day when the shipper's fruit was sold.

The auction house charges a three per cent commission, the broker charges the same, and in addition there is a small, almost nominal, fee for unloading the car. Compared with the usual commission of 10 per cent, together with cartage charges across the city, the saving in middle charges is apparent.

If less than a carload is shipped, it is possible that the railroad might refuse to shunt the car onto the siding, and cartage costs would then be added. But any community is susceptible to co-op-

any community is susceptible to co-operating to the extent of shipping their produce to market in the same car, thereby saving 50 per cent in freight costs, besides cartage. This would be the simplest and easiest method of instilling the idea of co-operation.

The fruit auction, then, broadens the market, makes possible direct comparisons in the quality of the products sold, lowers the intermediate charges by substituting an efficient system of selling and handling the fruit, and, by publicity, removes the possibility of dishonesty in the returns received. Why not give it a trial?

·A Plea

By Edna D. Murrett

DERHAPS to the average farmer, sentiment and success are not synonymous, yet I am often amazed at the indifference displayed when it comes to disposing of the surplus members of the barnyard family—especially the faithful horse that has become too old and feeble to be of active service.

"Dobbin has been a mighty good horse in his time," says the farmer. "If he were ten years younger I wouldn't sell him at any price, but he is beginning to play out. A. has been wanting him for some time, and I think the wisest thing to do is to let him go now while he will bring a reasonably fair price."

Perhaps mother and the girls shed

Perhaps mother and the girls shed tears at his departure. They hate to part with old Dobbin; he seems like one of the family. But he must go. The colt is coming on, or there is the expense of huving a younger horse. They pense of buying a younger horse. They comfort themselves by thinking that Dobbin will fare quite as well at neighbor A.'s barn, which, perhaps, he does for a time. But the A. family have not been so closely associated with Dobbin as to be governed by sentiment concerns. as to be governed by sentiment concerning him. The last time the master hears of Dobbin he is in the hands of Mr. B., a hard worker who will be sure to get the full value of the price he paid for the old here.

for the old horse.

Perhaps I am only an impractical woman, but my heart leads me to believe that the old servant that has spent his best strength in faithful toil for me has earned a respite from duty in the evening of his life rather than banishment

No, Mr. Farmer, if I were in your place, before I would sell old Dobbin, I would steal out to the barn some moon light night and quietly send a bullet through his brain.

It would be so much more comforting to me to think of his old body as molder ing peacefully in the soil of the home farm than to think of him adrift in the world of old horses, toiling feebly, perhaps in the night of blindness, perhaps suffering from hunger and thirst or beaten by blows from strange hands.

Paragraph Sermons.

By E. L. Vincent

HALF our worries come from something in our way of living yesterday, and the other half are reflections from the first.

BEFORE night something will happen that will lead you to say, "I don't know which way to turn. I'm so busy." We're glad this is so. The saddest, the loneliest, the most useless man is the man who has nothing to do.

THE man who takes his life-work down is digging the foundation from under his prospects for success.

WHEN you do a thing, do it with all your might; then drop it and look for something else. Mourning over the thing that has been done, and wishing you might have a chance to do it over again, is worse than crying for night to come back when the morning stars are telling of the new day soon to come over

Hearts and Hazards

[CONTINUED FROM PAGE 22]

-" Henkel stopped and stood listening a minute longer, intently. Then, puzzled, he placed the receiver on its

hook.
"The game's lookin' better," he said, turning round to Blackie. "I guess the old guy'll bite after all."

Later, though, while dressing, he paused thoughtfully. "Now, I wonder," he mused, "what made 'im hang up like

If Henkel was perplexed by this abrupt interruption—and he was—he discovered the reason for it when he arrived at Sage's office. Sage received him, standing, and the reception was cold and full of ill omen.

"I only want to say to you that if you're not out of this town by eight o'clock to-night I'll hand you over to the

police. That's all."

"W-why," stammered Henkel, for once in his life at a loss for glib speech,
"I—I don't understand—"

"Oh, yes, you do. You're nothing but a cheap crook, and a word from me will send you to jail. Now, get out of here. And don't forget, if you're found in this town after eight o'clock to-night you'll be arrested."

HENKEL departed. He immediately called up Sage's residence. Mrs. Sage, who had been expecting and dreading this call since yesterday, answered the telephone.

Relinquishing the receiver to her daughter, Mrs. Sage walked out upon the veranda and sat beside the screened

She almost held her breath as she

She almost held her breath as she listened, and this is what she heard:

"No. . . . No; I'm afraid I can't get it. . . . Yes, I tried, but I'm afraid it's no use. I'm terribly sorry. I hope you will have better luck elsewhere. . . . Oh, but I have; indeed, I have! I still have wonderful faith in you, and I know you will succeed in spite of everything. . . . Yes; it is distressing, but it can't be helped, it seems. I wish I could tell you how sorry I am. . . . Well, good-by, then."

To avoid seeing her mother, Gertrude passed through the dining-room to the kitchen, and so outdoors and to the side yard, where she occupied the lawn swing as one overwhelmed with melancholy. While she was proceeding sadly to this spot, Ben Abbott, in a somewhat similar cast of thought, was homeward bound for his midday meal. To walk to his home from her father's store did not require that he pass her house. Such a route, in fact, was decidedly indirect. Yet every day, since first he met her, Ben had taken this roundabout course, and always, when he drew near the hill whereon she dwelt, his heart had quick-ened, his feet had slackened, and his gaze had traveled upward to the brick-and-stucco house, with the hope of seeing her there.

He looked back upon last Sunday afternoon. He recalled—and he could do this with fidelity—every word she had uttered, and the vocal and facial expressions which had accompanied these words. Her most discouraging speech, as he remembered it was: "I don't like farm life. I couldn't bear it. If I had to choose my place of residence, I'd choose a big city." Well, suppose he gave up farming, then?—provided she promised to marry him. Suppose he agreed to move to the city?

The thought was peculiarly repugnant. He detested the city. And yet, so powerful was his love for her, he was

willing to consider anything that might

attract her favor.

Looking back at the lilac hedge he Looking back at the lilac hedge he strolled on as far as the corner, and there he came to a dead halt, staring profoundly at nothing.... But why give in to her views? Why not convert her to his? Why not teach her to love the country? And why not start at once? He might begin by taking her to his farm next Sunday. If she only knew the country, maybe she would love it as much as he. much as he.

BEN turned back. At any rate, it would do no harm to ask if she would go next Sunday. As he opened the gate and started up the walk he saw her emerge from behind the lilacs and move swiftly toward the rear yard. He was a little surprised at the action, for he was sure she had seen him, and her attire indicated no need to "dress for callers."

He found Mrs. Sage on the veranda, applying needle and thread to a cobwebby thing, and to her he stated his errand. She called to a servant in the

"Lena, will you tell Miss Gertrude Mr. Abbott is here?"

Lena, it seemed, required five minutes to perform this mission, and before she returned Ben was given to understand he was always a most welcome guest in the Sage household, and that both Mr. and Mrs. Sage regretted he didn't call

oftener. But the pleasure which sprang from this assurance was harshly dissi-

pated by Lena:

"Miss Gertrude," reported the maid hesitatingly, "is not at home."

Ben, never a quick thinker, was unable for a moment to grasp what she meant; he stared at her blankly. Nor did he at first understand why Mrs. Sage gave a gasp of astonishment. Then, as he realized what had happened, he flushed hotly to his temples, murmured something indistinctly, and stumbled blindly home.

His mother met him at the front gate. "Mr. Lukens was here this morning, Ben," she said. "He's in Peoria for a few days on business. He's staying at the Jefferson, and said he would like to see you to-night. I suppose he wants to talk about the farm."

"I'll see him after supper. Dinner ready, Mother?"

"It's been waiting fifteen minutes,

He ate in silence, unconscious of her troubled gaze, and started back to work

as soon as he had finished.

His evening repast was dispatched in like manner. Nor had his gloom lifted when, a little after sunset, he betook himself to the Jefferson Hotel. The journey, though short, was not devoid of incident. A small distance from the hotel he passed Gertrude, walking to-ward him, and she studiously cut him

Ben, therefore, was in no amiable humor when he attained his destination. He was sitting with Lukens in the hotel rotunda, trying, with no brilliant success, to talk intelligently about the farm, when Henkel and his friend Blackie, each carrying a suitcase, issued from the buffet in the direction of the street entrance. Henkel was obviously drunk, which perhaps was another factor in the subsequent unpleasantness.

HEY ordered the uniformed negro to call a taxicab, and while the darky was gone upon this errand they stood talking near the vestibule, and since they stood not five feet from where Ben sat he could not but overhear a part of what was said:

what was said:

"I guess this lets you out, Henk, as a moll buzzer." Thus Blackie.

"Don't get me wrong," protested Henkel. "I tell you I had her goin'. I could 'a' done anything with her. I had her eatin' out of my hand. You know me, Blackie. But when I told her to throw the hull and get the old guy's kale—" the bull and get the old guy's kale—"
That was as far as Mr. Henkel pro-

ceeded. He was suddenly confronted and interrupted by six feet of masculinity. This infuriated giant was Ben, and every ounce of his blood was boiling. ing. His utterance, too, was conspicu-ously uneven, but he managed to convey that unless Henkel desisted in his fuddled talk, so far as it applied to Gertrude Sage, Henkel would be pounded to a pulp.

Henkel's intoxication caused him to

forget prudence. His retort was garnished with vileness, and, almost in the same instant, Ben's fist crashed into his mouth. Henkel dropped to the tiled floor like a bag of meal.

A flurry of excitement followed. A crowd gathered as if my magic. Babble ensued. Lukens seized Ben's arm and hurried him away, urging upon him: "Keep cool and don't make a scene!"

Ben Abbott was now the coolest one

Henkel, also, was aided by his friend. Blackie motioned to the negro, gaping like the rest, and they contrived to remove him to the taxicab.

He was not in Peoria that night at eight o'clock.

Lost People

ELIE PRINCE, forty years old, heavy set, brown eyes and dark hair, is a lost brother to Eliza J. Padgett, Ducktown, Tennessee.

JAMES D. GLASS, age five years, was last seen in Greely, Pike County, Pennsylvania. Does not talk plainly, has fair complexion and heavy light hair. \$500 reward offered. Mrs. C. L. Glass, 13 Lienau Place, Jersey City, New Jersey.

LUDERNA CHAPMAN was last heard from at Ellendale, Dickie County, North Dakota. His sister, Mrs. Cemantha Webster, Ellisburg, Pennsylvania, is anxious to receive any word concerning him.

JOHN LUCK, tall, slender, brown eyes, black hair, left his home in Cold Spring, Kentucky, February 15, 1915. He has a birthmark the shape of a strawberry below his left ear. Address his mother, Mrs. John Luck, Cold Spring, Kentucky.

LUCIAN H. DODSON, age twenty-seven, slender, light hair, blue eyes, was last heard from January 10, 1915, at Joplin, Missouri. Information concerning his whereabouts will be very much appreciated. Address L. C. Dodson, Steubenville, Kentucky tucky.

WANTED to know the whereabouts of Charles Oscar Strandell, last seen at Index, Washington, five years ago. Height 5 feet 8 inches, weight 160 pounds, age fifty-eight. Please write A. Strandell, Lynden, Wash-

• The Selfish Man

By T. G. Wilcox

PRESUMABLY the thoroughly selfish man would have enjoyed being a giant in the olden time. Had he been the giant Atlas he would have made short work of our old world. No holding up the world for him: he would have not this all world into he would have put this old world into his mouth like an orange and sucked it dry. Only an unfortunate discrepancy in size be-tween the world and himself prevents this being accomplished in the present

Was not all the world created for his particular use and enjoyment?

Is he not entitled to the best seat in the theater, on the car, or at churchin fact, to the best of everything in this

Were not fellow mortals created that they might minister to him in all things, and make life comfortable for him? He

acts as if they were.

His thoughts dwell only upon one subject—himself. This subject looms so large in his little mind that the door is closed to all others save as they con-cern his interests. Everything revolves around that wonderful being—himself. Egotism clothes the selfish man like a garment, while he hastens to imprison himself in his self-built castle of loneli-

It is easier for oil and water to mix than for a thoroughly selfish man to be at ease with his fellow men. He may strive to mix with his fellow men—in rare moments he may seem to be one of them—and yet all the time he is an exile, and the invisible castle that his selfish acts have builded ever imprisons

The castle doors are fast-barred to all save the key of unselfishness, which is hid securely among the weeds of the field of covetousness.

The selfish man would gather all to himself. He reaches out eager arms: visions of enjoyment, satisfaction, plenitude, are his; he folds his arms again,

and they are empty.

The fruits that look so inviting to him crumble into ashes of Sodom at his touch, for his covetous fingers wither

the fairest fruitage.

He seeks for fulness, and his hands are empty; for pleasure, and she evades him; for comfort, and finds misery; for hope, and, lo, his feet are fast in the marshes of despair.

He has yet to learn that he who seeks all things for himself alone garners nothing. He who reaps but never sows will have at the last a vacant storehouse and an empty soul.

When a Man Deceives

By Harry Ashley

DE JUST what you would like to be thought to be. You cannot deceive very long at best; why try it at all? Thumping a fellow on the back and shouting, "Hello, old man!" is all right, but you will hardly reach his heart that way. More likely to give him a crick in the back and raise his dander a great deal

Book Reviews

MOTOR TRUCKS OF AMERICA is an illustrated book of 139 pages devoted chiefly to solving problems in hauling. Specifications and photographs of the principal motor trucks on the market are given. Published by the B. F. Goodrich Co., Akron, Ohio, and sent free of charge on request.

Granville Lowther and William Worthington have compiled a four-volume work entitled ENCYCLOPEDIA OF PRACTICAL HORTICULTURE, dealing with the practical essentials of fruit required as practical in the tials of fruit-growing as practiced in the Pacific Northwest. Over 500 pages to the volume, profusely illustrated. Encyclopedia of Horticulture Corporation, North Yakima, Washington. Price, \$20 for the four vol-

A book that will be a valuable help to suc-A book that will be a valuable help to success with poultry the country over is DISEASES OF POULTRY, published by the Macmillan Company, New York City. The authors, Dr. Raymond Pearl, F. M. Surface, and M. R. Curtis have jointly compiled this book, which was much needed. Price, \$2.

TEXTBOOK OF LAND DRAINAGE, by Joseph A. Jeffrey, describes the construction of tile drains, method of protecting outlets, and instruments used for the work. 246 pages, illustrated. The Macmillan Company, New York City. Price, \$1.25.

Wiring Houses for Electric Light, by N. H. Schneider, describes and illustrates the principal methods of installing electric wiring and the materials used. The national code and recommendations of the Board of Fire Underwriters are included. Cloth bound, 112 pages. Spon & Chamberlain, New York City. Price, 55 cents.

FARM CONTRACTS BETWEEN LANDLORD AND TENANT, by W. C. Tichenor, gives legal information on various systems of renting farms, and cites the law on problems such as repairs, maintenance of fertility, debts, expenses and crops. 214 pages. Published by the author, Lebanon, Ohio. Price, \$1.50.









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water in the container, which you empty once a
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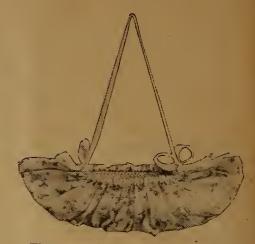
MICH.

The Needlewoman's Gifts Pretty Things Any Girl Can Make for Christmas

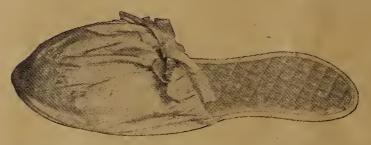


Any girl would be glad to find this pretty party bag among her Christmas gifts. It is easily made hy one who is clever with the crochet hook, and is a very dainty, useful, and in-expensive gift. A hall of mercerized thread, blue, white, or pink, and two and one-half yards of narrow ribbon are the materials required to make it. The crochet stitch used is simple.

NOTHING is dearer to the heart of the girl than a bit of dainty lace or other handwork, and gift-making at the other handwork, and gift-making at the holiday season is no problem at all for one who likes to sew. The six articles shown on this page take little time to make, the materials are inexpensive, and when completed they combine the qualities of a perfect gift—beauty, usefulness, and the intimate spirit which handwork imparts better than anything else. To enable every needleworker among the FARM AND FIRESIDE readers to make the articles, the complete directions for all six have been printed and will be sent to anyone who will send the Fancy-Work Editor, FARM AND FIRESIDE, Springfield, Ohio, eight cents in stamps.



The material for this cunning canoe pincushion cost only 21 cents, and the skillful needleworker can make it in an hour. Two widths of ribbon, a little cotton, and a paper of pins are necessary in its construction. The finished gift is very convenient, and at the same time adds a bright touch to the dressing table.



Comfort and charm are combined in these attractive hedroom slippers which any girl can make without difficulty in an hour or two of leisure time.



Made of silk or ribbon, this is just the thing for fancy work or dainty sewing. Made of cretonne or linen, and twice the size, it may be used to hold soiled collars, handkerchiefs, or mending.



A tie like this made of a color that harmonizes well with your suit is a pretty accessory for the plain shirt waist. A bolt of soutache braid will make two.

Nation's Business

The friend who likes to crochet

will appreciate this bag. Worn on the wrist of the left hand

while crocheting, the thread is always handy, and there is no danger of soiling or dropping it.

[CONTINUED FROM PAGE 10]

was in sight of a deficit, if it didn't actually have one, when the war started. Democrats reply that the tariff was made to get foreign trade, and has been getting it. They insist it must be maintained after the war if we are to retain that trade which the war brought us.

The state of the state of the world kerosene (coal oil). Gives every home a gas stove. Absolutely safe Cheapest fuel known.

Runs 5 hours for 1 coal. in that issue for either side; there never have been, though it has been endlessly talked about in past campaigns. The American people don't pay much attention to political platforms anyhow; there's a general feeling that they are made for campaign purposes more than as a guide to legislative action after-

Watching the ebb and flow of sentiment and the general listlessness of the campaign, I should say the issue will be decided mainly on these questions:

1. Has Wilson kept us out of war, maintained national rights and dignity, and done the best that could be done in Mexico? Democrats say, Yes. Republicans say, anybody could have kept us out of war, because nobody wanted us in; that he had sacrificed national dignity and self-respect by permitting Germans to submarine us and the allies to interfere with our commerce; and that he has failed utterly to protect either life or property in Mexico.

2. Is a Democratic or a Republican tariff policy best for the country in the era of world reconstruction that will follow the war?

3. Is the Democratic party intellectually and temperamentally as well fitted to administer the big business of this big nation as the Republicans? My guess is that this particular issue will determine more doubtful votes than any

other one.

4. Was the settlement of the strike the best that could be accomplished in the circumstances? Or was it a surrender in the face of a hold-up, with a train of disastrous consequences coming in its wake?

This country seems unlikely ever to

This country seems unlikely ever to have another campaign like that of "Tippecanoe and Tyler, too," or that of Blaine and Cleveland in 1884. The whoop-'er-up sort of politics isn't in vogue any more. The other day I was told by a Democratic insider that his party's publicity bureau pulled off a clever trick by leasing practically all the billboards in the country for political purposes before the Republicans thought about it. The next day a Republican of eminence assured me that his party would spend a total of \$200,-000 on magazine and \$800,000 on news-

paper advertising.

The publicity end of a campaign is more and more the important end. It's the business of selling your goods to the voters for their votes, precisely as if you were selling soap or safety razors: you advertise, as everybody else does these times. Speaking is less and less important; reading more important.

MR. HUGHES never told a soul that he was a candidate for the nomination, but the minute he learned he was nominated he became "100 per cent a candidate," telegraphed an acceptance, resigned from the supreme bench, and waded right in. He has traveled many thousands of miles, made several hundred speeches, long and short, shaken hands with some hundreds of thousands of voters, and looked over probably a view.

million and a half of them in gatherings that have greeted him. Mr. Wilson has not made many speeches, and most of them from his summer place at Shadow Lawn, to delegations of visitors. Still, the speech isn't the thing so much as publication thereof in the papers, and a President has a big advantage in this, for the newspapers carry any word he says to the remotest nook of the country.

EACH Presidential candidate practi-cally appointed the chairman of his national committee to manage his fight. Mr. Wilson designated Vance McCormick of Pennsylvania, who had been Progressive and was expected to appeal to the Progressives' support. Mr. Hughes named William R. Willcox, a former public service commissioner in former public-service commissioner New York. Each chairman was a personal friend of the candidate who named him, and each was a good deal of an experiment as a political chieftain. Candor compels the opinion that neither has developed talents of the sort that set rivers afire.

There is one plank in the Republican platform that I suspect was responsible for winning, a good deal of big business support. It declares in favor of central-izing in the Federal Government all the forces for regulation of the instruments of interstate commerce; that is, doing away with state railroad and public-service commissions, and giving the national Interstate Commerce Commission authority over state as well as interstate commerce. The Democrats remained silent on that subject, though some state-rights Democrats wanted to denounce the Republican proposal. The matter has had very little public discussion in the campaign, but has been considered highly important by business interests, especially railroad people, who generally indorse the Republican [CONTINUED ON PAGE 30]

SMALL DOCTOR'S BILLS

Scientific Feeding the Way to Reduce Them.

A little science in the selection of food leads to good health and smaller doctor's bills. Ill health not only cuts down the earnings but increases the cost of living, too. As many ailments come from improper feeding it stands to reason you

won't need the doctor so often if you feed yourself and family right.

The Principal of a Texas school writes as follows: "When I began the use of Crope Nuts my wife and I was at a me Grape-Nuts my wife and I were at a resort for our health in South Texas, and our lives were indeed miserable as a result of continual bad health, and heavy doctor's bills.

"A merchant advised me to try Grape-Nuts as a diet. Doubting that it would benefit me any, I took home a package, and before I had used this box I had begun to see the good effect it had on my digestion, so I continued its use. I discontinued medicine altogether as Grape-Nuts was doing more for me than all the medicine I had taken.

"When I returned home my friends and neighbors hardly knew me, I had improved so in health, appearance and

recommend Grape-Nuts for a plain simple diet full of nourishment, just the thing for that worn and tired out feel-Name furnished by Postum Co., Battle Creek, Mich.



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"The Two-Occasion" Dress": with the sleeveless coat, a street costume; underneath, a pretty dress. No. 3161—Surplice Waist with Full Sleeves and Shirred Belt. 34 to 42 bust. Pattern, ten cents. No. 3162—Gathered Skirt with Plaited Front Panel. 24 to 32 waist. Width, three and one-half yards. Pattern, ten cents. No. 3163—Sleeveless Coat in Redingote Style. 34 to 42 bust. Pattern, ten cents.



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No. 2950-Balkan Bloom-No. 2950—Balkan Bloomers, Perforated for Knee Length. 22, 26, and 30 waist sizes. The price of this Balkan bloomers patNo. 2907—Belted Negligee Jacket. 34 to 44 bust. In dainty materials, lawn or dimity would he pretty. For cold winter mornings, flowered challis or flannelette is best. Pat-



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THESE patterns may be ordered from Pattern Department, FARM AND FIRESIDE, Springfield, Ohio. State size, give full address, and enclose correct remittance.

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APPLE CHARLOTTE

Sparkling Gelatine 12 cup cold water 12 cup boiling water

2 tablespoonfuls lemon juice 1 cup cooked apple pulp ter Whites of three eggs 1 cup sugar

Soak gelatine in cold water five minutes and dissolve in boiling water. Add sugar, and when dissolved, add lemon juice. Strain, cool elightly and add apple pulp. When mixture begins to stiffen, beat, using wire whick, intil light, then add whites of eggs, beaten until stiff, and beat thoroughly. Turn into mold that has been dipped in cold water and if desired line mold with lady fingers or eponge cake. One pint whipped cream may be nsed in place of whites of eggs—and canned fruits may be used in place of apples.

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Children's Corner

The Feud of Wapsidoodle and Snollygoster

By Georges Saint Amour and Newton Fuessle

Part II

POR one thing, the fight, which would shake the very desert as if by earth-quake, would frighten his mother. How could he prevent it? Several times he crossed to the window and gazed out at the mountain. He could see the long, narrow hole called Beast's Canyon, which Snollygoster had made when Wapsidoodle threw him off the mountain top. Somewhere in that canyon, he mused, was the place to find Snollygoster.

Presently an idea took possession of him, the idea of starting out for the mountain, find these giants, and tell them how foolish they were. It may be a little difficult for you to understand the task which Bobbie had decided upon. the task which Bobbie had decided upon. Imagine, if you can, vast stretches of sand—bare, bare, bare, except for the little clumps of mesquite here and there, perhaps cactus or only sandy stretches for miles and miles. It was June when Bobbie stole away from the bungalow on the opposite veranda of which his mother sat painting, and June is fearfully hot down there on the desert.

HE HEADED straight for Beast's Canyon. As he plodded on, his feet kept sinking deeply into the sand, and walking was extremely hard. The sun beat so hot on his head that it made him dizzy. Sometimes he would look back to see how much ground he had covered. Before long a sandstorm blew up, but to see how much ground he had covered. Before long a sandstorm blew up, but it struck Bobbie from the side and was comparatively light, and by turning his head a little he could easily prevent the powdery sand from entering his eyes and ears and interfering with his breathing. Had it been a big storm he might have perished. He drank from the water bottle he had brought with him after the storm had blown past. Looking back once more, he saw that the sandstorm had completely hidden his tracks, and he could also see that he had made considerable progress. The mouth of Beast's Canyon was much nearer by this time, and he trudged sturdily in its direction. direction.

Soon he was very close to the mouth of Beast's Canyon. It looked wild and desolate. He could see, as he drew nearer, that in some places the tops of the cliffs which formed the two walls of the canyon were so close together that they did not even let in the sun.

Bobbie's steps were lagging and his feet dragged. He was so dreadfully tired that once in a while he staggered a little. But he had no intention of quitting. He felt certain that he was very near Snollygoster's hiding place by this time, and he kept driving himself straight ahead. When at last he entered the canyon he let out a cheer for very gladness

very gladness.

Then, well in among the shadows of the gloomy canyon, he sank to the ground to rest, murmuring drowsily: "Snollygoster may see me now and come on out of his hole."

Those who know anything at all about the lobo wolf, know that the big gray "loafer," as the cowboys call him, is a very silent sort of fellow. He is nothing

more or less than a big wild dog.
Soon after Bobbie had sunk to the ground inside the canyon, a lobo wolf, who had been aroused by the boy's cheer, smelled his presence as well, and came trotting down the canyon. At a distance of forty-five feet the big lobo paused, hidden behind a shoulder of lava rock. He advanced cautiously a step or two. Then he stopped again, his head tilted high, the point of his nose twitching as he sniffed the air.

Bobbie slept peacefully on, dreaming of the two monsters whose feud he had come to interrupt. The lobo continued to advance, cautiously, inch by inch. Suddenly something made him look behind him. Forgetting all about Bobbie now, he began sniffing the air. The lobo did not look so brave any more. He glided back behind the sheltering border of lava again, his belly nearly touching the ground. The lobo detected sounds which the keenest of human ears could not have perceived.

not have perceived.

Presently, however, Bobbie too, had he been awake, would now have heard sounds also up the canyon. He would have heard the grating and rasping and rolling sound of moving stones. And soon afterwards he would have heard heavy breathing which filled the air of the darkened canyon with a strange odor. The lobo knew the danger that threatened. The hair on his back stood up straight. His teeth showed long and yellow behind his parted black lips.

up straight. His teeth showed long and yellow behind his parted black lips.

Suddenly, like a crash of thunder, there rang through the canyon a roar which made the lobo leap fully five feet into the air. The roar also brought Bobbie to his feet with a bound. Had he lifted his eyes he would have beheld a monster silver-tip bear—brother of the grizzly—standing on the canyon's edge, almost directly above. But Bobbie beheld only the terrified lobo, and, knowing very well what sort of a beast this was, he was frightened. But before he had time to realize how frightened he was, the lobo was bounding off into the canyon at top speed.

But now the lad became aware of the odor which filled the canyon. He realized it had not been there when he had entered the canyon. Suddenly a stone fell from somewhere above, landing close to Bobbie's feet. He looked up for the first time. Seeing the monster silver-tip, a look, not of fright or panic, but of delight flew into Bobbie's face.

"There's Snollygoster! There's Snol-

"There's Snollygoster! There's Snol-

in appeal to the next greatest and most dangerous beast in the Rockies.

"Come down, Snollygoster, come down," he said gently. "I came to talk to you about Wapsidoodle."

The silver-tip regarded the boy in bewilderment, peering over the edge of the canyon as Bobbie danced for joy, for he believed that Snollygoster was trying

he believed that Snollygoster was trying to find some way to get down to where he stood that he might listen to what he had to say.

lygoster!" he cried, and raised his arms

BUT suddenly the silver-tip reared on his hind legs, and, standing upright to his full eight or nine feet of height, he roared with rage until Bobbie had to clap his hands over his ears. There could be but one meaning to the animal's

to clap his hands over his ears. There could be but one meaning to the animal's conduct. Snollygoster must have decided to attack Wapsidoodle, just as Daddy had said, and he was calling to his enemy on the top of the mountain.

"You come down here!" he scolded, stamping his foot. "You come right down here and listen to me. I'll stop Wapsy too if he tries to cut up the way you are."

Snollygoster grew careless in his rage and stepped out too far on a shelving rock as he roared at Bobbie below. The rock began to tip. Bobbie, seeing what was going on, retreated, horror-stricken, realizing that Snollygoster was going to fall two hundred feet into the canyon. He saw the danger of the falling rock and scrambled swiftly out of its path, crying at every step: "Poor Snollygoster!"

When the crashing roar of falling rocks and earth had ceased, and even before the clouds of dust and sand had stopped rising from the canyon, Bobbie was at the side of the great dead beast, patting his head, and sincerely mourning the death of Snollygoster, as he firmly believed him to be.

Just before sundown that day Bobbie was found by his frantic father and

Just before sundown that day Bobbie was found by his frantic father and mother. He was seated beside the body of his friend, crying a little, for he was deeply sorry that Snollygoster was dead. Suddenly the sun shone upon the canyon Suddenly the sun shone upon the canyon wall where rock and earth had been torn away by Snollygoster's fall. Gleaming and glittering in the last rays of the sun, Bobbie's father and mother seemed to see the thing which Daddy had been searching for for two years.

"Gold!" cried the man.

"I wonder!" said the mother. "Anyhow, it doesn't matter, dear. We've found our little boy."

Again she gathered Bobbie in her arms, and covered his face with kisses, and Daddy too turned with wet eyes to Bobbie and his mother.

New Puzzles

At the Wash

A poetical Chinaman's sign reads: 6 collars, 7 cuffs there be, In cents we charge you 33; 7 collars and 6 cuffs to do, The charge is only 32.
The work is good and up-to-date So figure out in cents the rate.

Answers to Puzzles

Puzzles Printed Last Issue

Concealed Geography

Butte, Cape May, Charleston, Colorado, Erie, Maryland, Washington, Denver, Easton, Utah, Indiana, Missouri,

Nation's Business

[CONTINUED FROM PAGE 28]

With women voters participating in the choice of a great big bunch of Presidential electors this year, the ladies are being courted as never before. The Republicans declared for woman suf-frage, and their candidate added that he wanted it to be brought about through national action; the Democrats through national action; the Democrats in their platform and through their candidate indicated that they were amiably disposed toward the ladies, but guessed the action of the separate States ought to decide it. The Republicans thought they had decidedly the better position on this issue. But when they sent a women's campaigning train on a tour de luxe of the country, it didn't get a very flattering reception, and the Democrats cheered up quite a bit.

Of course, both sides announced duly, in the last days, that the other was going to buy the election. That's so much the usual thing that nobody seriously expects to be bought any more. The truth is that both sides had hard times raising campaign funds, but that both

raising campaign funds, but that both did pretty well in that regard.



The man with whom it has been Uncle Peleg's custom to split a pair of shoes is moving away to another town



\$2,000 in Easily Won Prizes

To Be Given Away by Farm and Fireside

ERE'S the opportunity you have been waiting for—the one big chance of a lifetime to get a fine automobile without costing you one penny. We're going to give away three fully equipped, 1917 Model Five-Passenger Touring Cars. We're going to give away a Victrola, a beautiful diamond ring, and other handsome prizes, to say nothing of the small fortune we shall give away in money. Never before has a farm paper distributed among its readers prizes and money with such a lavish hand. Anyone who has a little spare time this fall can take part in this Grand Prize Distribution and win a valuable prize with a little effort. The one big chance of a life-time to get a fine automobile without costing you one penny. That's the wonderful opportunity now offered you, if you'll just stretch out your hands. Think of it! A chance to realize your long cherished ambition to have a fine car of your own.

Don't let this big opportunity escape! Don't put up a cent or do any hard work. No matter who you are or where you are guaranteed a fair, equal chance for one of these big, handsome, valuable prizes.

Turn Play Time Into Profit

That's just what you can do—Turn your PLAY time into profit—and do it in the most pleasurable and agreeable manner. No hard work—no disagreeable duties—just an investment of a little spare time—just a way at last to really capitalize on the fruits of your own geniality and good fellowship. Winning one of these fine Touring Cars will be a pleasant and enjoyable recreation for you during the fall months, and think of the pleasure this big handsome Overland will bring to you and your many friends, all through the coming year. Could you put your spare moments to a better use?

Friends, relatives and acquaintances will all jump in and help you win the big prize, because they get big value. But the biggest help you get from US. We haven't room to give all the facts. We'll tell it all a little later. Then you'll want to act quick. You will be really surprised at how easy it all is. Write at once and get the easy instructions that will make you a Big Prize Winner.



Second and Third Grand Prizes

Above and below are illustrations of the latest 1917 Model, Ford Five-Passenger Touring Cars we are going to give away, in addition to the \$635.00 Overland, as SECOND and THIRD GRAND PRIZES in FARM AND FIRESIDE'S Grand Prize Distribution. As you will see by the pictures, these are the newest models, brand new and fully equipped

AND FIRESIDE'S Grand Frize Distribution. As you will see by the pictures, these are the newest models, brand new and fully equipped.

Either the Overland or one of the two Fords are prizes that are worth many times the small effort required to win one of them.



Don't Wait, Enter Now to Win

Now is the Golden Opportunity. Don't say that you'll wait and send in your name to-morrow. TO-DAY is the time. Boost your chances 50 per cent by getting in on the ground floor, right at the beginning, with 5,000 free votes—just the votes you may need to win the handsome Overland Touring Car, or one of the famous Fords.

The combined value of prizes, premiums and cash we are going to give away is by far in excess of all others. The prizes offered are of real, KNOWN value and reputable origin. Last year hundreds of our readers entered these friendly Prize Distributions—people who were not one particle better qualified than you are this minute. And to-day many of them are enjoying the prizes that right now are within your reach. And, remember we are giving away THREE Splendid Touring Cars. You may get the Overland, perhaps one of the Fords. But what's the use of guessing. You're sure to win for there are no losers in this grand All-Can-Win Prize Distribution.

Here is the List of Grand Prizes

1st Grand Prize—\$635.00 Overland Five-Passenger Touring Car, 1917 Model, electric starting and lighting, head-light dimmers, left-hand drive, center control, magnetic speedometer, demountable rims, etc.

2d Grand Prize—Ford Five-Passenger Touring Car, Latest 1917 Model, fully equipped.

3d Grand Prize—Ford Five-Passenger Touring Car, Latest 1917 Model, fully

4th Grand Prize—\$75.00 Victrola. 5th Grand Prize—\$50.00 Diamond Ring. 6th Grand Prize—\$50.00 Fur Coat.

7th Grand Prize—\$25.00 Gold Watch. 8th Grand Prize—\$25.00 Gold Watch. 9th Grand Prize—\$25.00 Gold Watch. 10th Grand Prize—\$25.00 Gold Watch.

A Prize for Everybody
Ten per cent cash commission checks to

all except winners of Grand Prizes.

The contest closes January 15, 1917.

In case of a tie for any prize a prize identical with that tied for will be given to tying con-

A SQUARE DEAL GUARANTEED

We wish to guarantee to the readers of
FARM AND FIRESIDE that this Prize Distribution will be conducted with the utmost
fairness in every way and that the prizes
will be awarded just as represented.

FARM AND FIRESIDE.

Send Coupon Without a Moment's Delay

If you want the Fine Overland or one of the Fords, without a cent of expense, or a lick of real work—if you want to dip your fingers into the richest prize distribution ever offered by a farm paper, do as we say—fill out and mail this coupon. Don't try to figure out now which of these prizes you'd like to get, just wait until you know how easy it is to get them.

Can you think of a single thing you would rather have than one of these three automobiles or one of the other Grand Prizes? Surely you want one of the Grand Prizes—of course you do. Can you think of a surer or quicker way to get it than to send your name and address at once. Bear in mind, however, that "luck" has nothing at all to do with being a big prize winner. You don't have to be "lucky"—all you need do is to make the little easy effort required. Start at once.

Don't wait a day before sending for all the facts. You'll be under no obligations. You'll have time to decide after you get them. But get them now before your neighbor does—before he gets this handsome Overland car away from you.

The thing to do is to jump right into this Grand Prize Distribution at once and start off with 5,000 FREE VOTES to your credit. That's a splendid, sure-to-win beginning—that's the way to do things. You remember the story—"It's the early bird that catches the worm." You can't afford to hesitate and let someone else get ahead of you. Of course, you will want to get an early start so you won't miss a thing. There's one thing sure, and that is someone is going to get the Overland without one cent of cost—two more hustlers are going to get two 1917 Model Fords, and seven others are going to get the other Grand Prizes, not to mention the hundreds of people who will be given big cash commission checks. Certainly you're not going to let this big chance pass by without taking advantage of it—someone is going to get this Overland and it might as well be you as anyone else. Don't let someone else beat you to it, but act quickly yourself.

It does not matter if you are a man, woman, boy or girl, all have the same equal, fair chance. You, all of our friends, subscribers, and readers are eligible to share in these Grand Prizes. But you'll want to act quick. Send your name to-day for full details. After you get our proposition you can decide whether or not you want to take it up. If you don't you are not under a single particle of obligation. Send the coupon without a moment's delay.

Good for 5,000 Free Votes

Sign

and

Mail the

Coupon

To-day

T. R. LONG, Manager, FARM AND FRESIDE, Dept. B, Springfield, Ohio.

DEAR SIR:-

Please send me by return mail full information regarding your GRAND PRIZE DISTRIBUTION. (This puts me under no obligation.) Also please credit me with 5,000 Free Votes.

	Name
*	Post Office
	R. F. DBox No

T. R. LONG, "Auto" Contest Manager FARM AND FIRESIDE

Dept. B
Springfield, Ohio



This famous attachment used with a Ford or Maxwell chassis, makes a fully guaranteed oneton truck that will save you three hours out of every four it now takes you to do your hauling with teams

F.O.B. Chicago Any two men can install the Smith Form-a-Truck attachment on a Ford or Maxwell chassis in a few hours

Form-2-Truck

Economical Service







Time Saving, Money Earning Economy in all Classes of Farm Work, demonstrated daily by thousands of owners

Smith Form-a-Truck is an attachment which combines with any Ford or Maxwell chassis to form a fully guaranteed one-ton truck.

To install a Smith Form-a-Truck attachment it is only necessary to remove the rear wheels from a Ford or Maxwell chassis - fit the Smith Form-a-Truck frame over the car frame - bolt it securely at the front end of the car frame and put sprockets on the rear axle spindles which formerly carried the car wheels.

This work can be done by any two men in a few hours. The result is a fully guaranteed one-ton truck; double chain drive; 125-inch wheelbase; 9- or 12-foot loading platform, as desired. Rear wheels are furnished with solid tires - pneumatics optional at higher cost.

The Smith Form-a-Truck is so constructed that when installed on a Ford or Maxwell chassis, the Smith Form-a-Truck rear axle carries 90% of the load.

Records of service from thousands of owners show an operating cost per ton mile of 5c; a tire mileage of six to eight thousand miles per set; a gasoline mileage of 12 to 18 miles per gallon; an average speed of 12 to 15 miles per hour in actual farm service. Smith Form-a-Truck is doing work in a few hours which requires horse-drawn service all day to accomplish.

On long trips to town, instead of starting away at three or four in the morning and getting back at seven or eight at night, the man who uses Smith Form-a-Truck can easily make the trip in the morning and have his Smith Form-a-Truck for general work around the farm the balance of the day.

Smith Form-a-Truck not only goes anywhere horsedrawn vehicles can go, but many places where horses would be stuck. It hauls a bigger load and saves not only time, but in the number of men employed to do the hauling you must have done.

You can equip the Smith Form-a-Truck chassis with any regular or special type body, and as a special feature to farmers, we are offering at a moderate additional price, our famous Eight-in-One Convertible farm body, giving eight complete farm bodies

Send for our new Farm Book - it is free.

Suite 943, Smith Form-a-Truck Building 1470 Michigan Avenue, Chicago, Illinois

and BACK XTRA EQUIPMENT NECESSA TO DO BALANCE OF HAULING -MAIL IT TODAY Smith Form-a-TruckCo.
Smite 943, 1470 Michigan Ave.
Chicago, Illinois
Gentlemen:—Without obligation
on my part please send me full details of your attachment and the new
convertible body for farm use. I am
interested in how the Smith Form-aTruck can save me money and give me
better service than 1 am getting with horses,

Wasteful

Extravagance

County ...

Number acres owned

More Than 600,000 Copies Each Issue

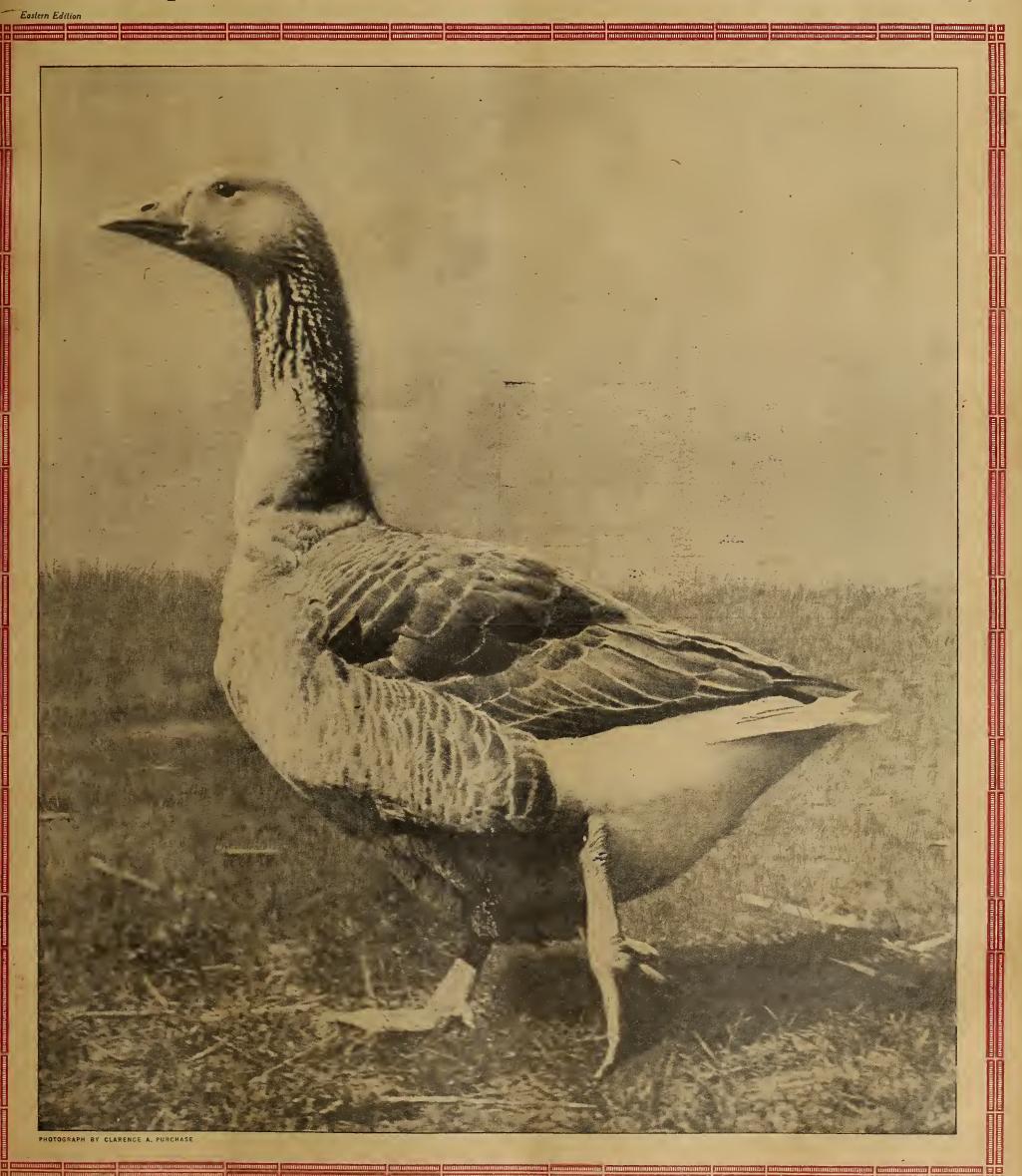
FARMand HRESIDE

The National Farm Paper - Twice a Month

ESTABLISHED 1877

5 cents a copy

Saturday, November 18, 1916



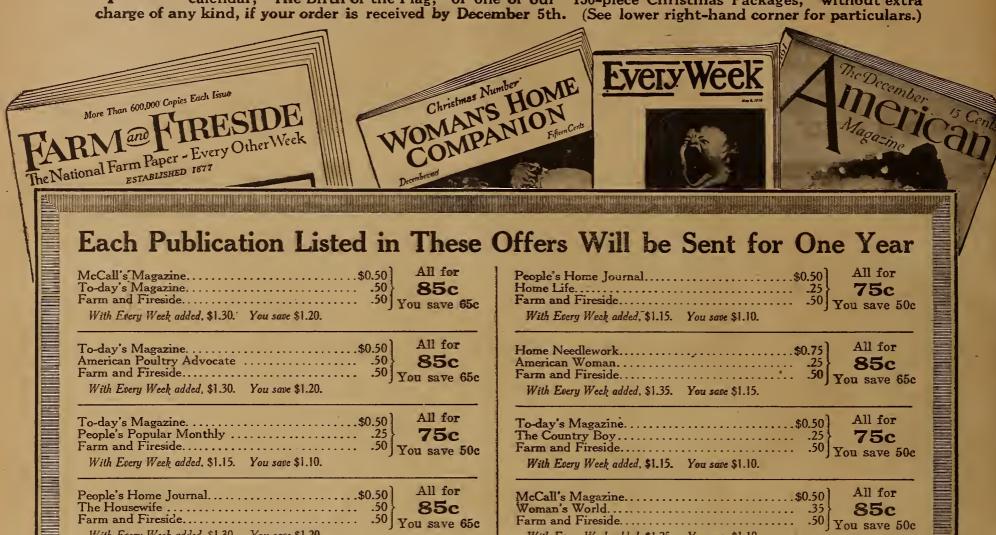
A Splendid Gift for You

If You Order Before December 5th

DART of FARM AND FIRESIDE'S service to its readers is saving them money on their reading matter. Arrangements have been completed enabling us to extend our Bargain Club Offers to December 5th. Many of our readers took advantage of the wonderful offers made in our November 5th issue. They saved money. The offers below are at the very lowest prices possible. Don't wait-order now and avoid hav-

If you are already a subscriber to any of the magazines, mark your order Renewal and your subscription will be extended from present expiration.

Special: As an added incentive to get your order in on time, you may have your choice of our beautiful 1917 calendar, "The Birth of the Flag," or one of our "150-piece Christmas Packages," without extra charge of any kind, if your order is received by December 5th. (See lower right-hand corner for particulars.)



With Every Week added, \$1.30. You save \$1.20. With Every Week added, \$1.25. You save \$1.10. Little Folks. .\$1.00
American Woman . .25
Farm and Fireside. .50
All for
\$1.10
You save 65c All for To-day's Magazine. .50 Farm and Fireside. .50 You save 90c With Every Week added, \$1.60. You save \$1.40. With Every Week added, \$1.50. You save \$1.25.

LaFollette's Magazine \$1.00 All for National Monthly 1.00 Farm and Fireside 5.50 You save \$1.15 Home Needlework .75 Farm and Fireside .50 You save 90c With Every Week added, \$1.75. You save \$1.50.

About Every Week
Practically all readers of
FARM AND FIRESIDE know that
we also publish Woman's
Home Companion and The
AMERICAN MACAZINE. We have
recently added another publication to our family. Every
Week, a magazine of fact and
fiction, humor and sunshine.
As is indicated by its name,
Every Week is published 52
times a year. It contains a
world of interesting information for men and women who
like enappy, straight-to-thepoint articles, extraordinary
stories, and wonderful pictures.
The photogravure section and
the handsome six-color covers
will make Every Week a welcome visitor to your home. Be
sure to include it with your
order.

The Crowell Pub. Co. Remarkable Two-Publication Clubs Woman's Home Companion....\$1.50 Every Week (52 issues). 1.00 \$2.00 Farm and Fireside. 50 You save \$1.00 The American Magazine. \$1.50

Every Week (52 issues) 1.00 Farm and Fireside 50 You save \$1.00 Youth's Companion \$2.00 Woman's World 35 Farm and Fireside 50 You save 70c

Woman's Home Companion\$1.50 The Crowell Pub. Co.

Prices quoted in list below include BOTH FARM AND FIRESIDE and the publication listed one year each.

Young's Magazine 1.55
Youth's Companion 2.10

Remember! These prices are good to December 5; 1916, only—also that you will receive your choice of our 1917 calendar, "The Birth of the Flag," or the 150-Piece Christmas Assortment of cards, tags, seals, stickers, etc. Send your order right away, using the order form to the left. Be sure to state whether you want calendar or Christmas Package.

Use This Convenient Order Form

CLIP ON THIS LINE

FARM AND FIRESIDE Springfield, Ohio

You will find enclosed \$......to pay for subscriptions for one year each to FARM AND FIRESIDE and magazines I name below. If this order reaches you by December 5th, I am also to receive as a good-will gift

(State whether you want Christmas Package or Calendar)

(Name of magazine desired with Farm and Fireside)

(Name of magazine desired with Farm and Fireside) (Use this line for remarks)

If you want magazines sent to different addresses use a separate sheet of paper and pin to this couper. ONE ORDER - ONE REMITTANCE - FOR ALL YOUR MAGAZINES Let Farm and Fireside save you money and trouble

Our 1917 Calendar

We have a pleasant surprise for our FARM and FIRESIDE family this year. Instead of the usual style calendar we have picked something that is very much in keeping with the times. With war clouds all around us, and the martial spirit in the atmosphere everywhere, what could be more appropriate than the subject we have picked—"The Birth of the Flaq." This beautiful picture shows the making of the original "Old Glory" in the little sewing room of the revered Betsy Ross—the delicate colors of the original painting are faithfully reproduced. The picture is mounted on a handsome green—gray background which sets it off to the best advantage.

The calendar pad is large and easily read. You will certainly want a copy of this masterpiece of the printer's art.

15U-Piece Christmas Package is a beauty this season. The handsome cards, seals, stamps, stickers, etc., are just what you will need to give the proper holiday touch to your gift packages and correspondence. Almost everyone nowadays uses these pretty emblems of good will. Their meaning cannot be erressed in words. Our package consists of the following:

100 small and medium seals, stickers, etc.

10 cards and tags

8 large cards, tags and labels

22 gummed stamps, assorted sizes and subjects.

Each article is lithographed in many colors, and will reach you will be extremely well pleased.

Your can have either the Calendar or the Christmas Package is a beauty this season.

150-Piece Christmas Package

You can have either the Calendar or the Christmas Package without additional cost if your order for magazines reaches us by December 5th. Be sure to state which you want. Use the order blank, and address:

Good-Will Gifts for Promptness

Farm and Fireside

Springfield, Ohio

TARVano FIRESIDE

Published Twice a Month by THE CROWELL PUBLISHING COMPANY, Springfield, Ohio

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Vol. 40

Springfield, Ohio, Saturday, November 18, 1916

in 4

Our Fortieth Year

A Message from The Editor to Farm and Fireside Readers



After teaching school for 23 years F. F. Showers made a big success of a 40-acre farm



John D. Rockefeller almost never writes for publication—but he has written an article for us



Here is a tenant, E. H. Welker, who will soon have money and credit enough to buy a farm

LITTLE paper was founded at Springfield, Ohio, in 1877 to advance the interests of the agricultural implement business of the late P. P. Mast. Because it catered to all members of the family, and let its readers edit it, the little paper grew to a position of national prominence and strength

and strength.

That little paper, founded so long ago, is FARM AND FIRESIDE. It is entering upon its fortieth year, and to-day is read in more than 600,000 farm homes scattered over every State in the Union, and many for-

All of these people have taken and read the paper because it had high ideals and has always lived up to them. FARM AND FIRESIDE is to-day, as in the past, a practical farm paper edited by farmers for farmers. FARM AND FIRESIDE has been such a success because it has rendered service to its readers, because it has been helpful, because it has been authoritative, because it has been interesting, entertaining, well illustrated, and well printed.

If any one thing has differentiated FARM AND FIRESIDE from the ordinary run of farm papers, it has been the realization on the part of the editors during these forty years that "paste pot and shears" could not edit a farm paper that would render actual service to its readers, and that the American farmer

service to its readers, and that the American farmer was not only entitled to the best but was willing to pay for it.

the last forty years FARM AND FIRESIDE has always been on the alert to do its share in the big movements for bettering farm life. FARM AND FIRESIDE was one of the first and strongest advocates for rural free delivery. In the face of much opposition FARM AND FIRE-SIDE later fought a successful fight for parcel post. For years FARM AND FIRESIDE has been advocating and discussing an adequate system of rural credits. It became such an authority on rural credits that Herbert Quick, formerly editor of FARM AND FIRESIDE, was made a member of the Federal Farm Loan Board by President Wilson. All the practical and modern farm practices and ideas have long been familiar to FARM AND FIRESIDE readers.

In addition to supplying the farmer and his family with news and information in regard to the business of farming, FARM AND FIRESIDE has always held it to be a part of its mission to supply the farmer's family with a proper amount of mental recreation. Good, clean stories, well-conducted household departments,

fancy work, patterns, millinery styles, puzzles and games for the children, and an occasional fine sermon constitute the Fireside section of the paper.

FARM AND FIRESIDE was one of the first farm papers to adopt a high advertising standard, which includes the elimination of questionable advertising of all kinds and a guarantee to its subscribers of fair and square treatment in their dealings with the advertisers. Of course, such a policy has paid. A high standard of reading matter and a high standard of advertising cannot fail to win, and to-day FARM AND FIRESIDE stands as a fine expression not only of the firm that publishes it but of the best type of American farmer who reads it.

What Old Subscribers Testify

THOUSANDS of old subscribers testify to these facts in a most unmistakable way. They have renewed their subscriptions year after year. These timetried readers do not need any promise or forecast from me of next year's FARM AND FIRESIDE. They know. From the past they know that FARM AND FIRESIDE in 1917 will live up to its own good record. But to the thousands of newer members of this huge FARM AND FIRESIDE family, and to those friends and neighbors of theirs to whom I wish them to recom-

mend FARM AND FIRESIDE, the National Farm Paper, I am writing this message of promise for next year.

Just as you are better farmers and housewives year by year, and learn more about your land, your live stock, your orchards, your crops, your home, poultry, and dairy, so we have been learning year by year more what FARM AND FIRESIDE readers want in their farm paper. How do we know? Why, thousands of our readers have written and are writing us month after month asking for information and advice on all kinds of farm and home problems, and so we have learned.

so we have learned.

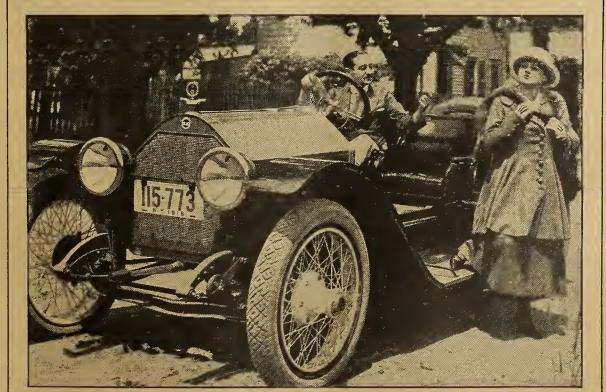
During 1916 FARM AND FIRESIDE won an enviable reputation for having good cover pictures. The cover pictures for 1917 will equal the 1916 covers in interest and attractiveness.

According to the plans for 1917, every one of the twenty-four issues of FARM AND FIRESIDE will contain: Four pages of timely, well-illustrated, and interesting feature articles (pages 3, 4, 5, and 7); an Editor's Letter; a Washington Letter, which will keep you well informed about what is really going on at the nation's capital; an editorial page with interesting discussions of timely subjects, and a letter box giving several letters written by subscribers; departments filled with helpful articles on automobiles, machinery, live stock, dairy, garden and orchard, crops and soils, and poultry; an illustrated story; a department of stories for the children: puzzles: a Fontaine

chard, crops and soils, and poultry; an illustrated story; a department of stories for the children; puzzles; a Fontaine Fox cartoon; a health department conducted by Dr. Spahr; departments of fancy work; patterns; Housewife's Club, cooking, household hints, needlework, recipes; and Sunday Reading.

More pictures will be used in FARM AND FIRESIDE in 1917 than were used in 1916. The pictures in FARM AND FIRESIDE are not designed simply to make the paper pretty, but to illustrate the points in the reading matter. Pictures place interesting facts more vividly before the mind than whole pages of written description without pictures. Our readers are practical people—they want to see a thing. The pictures in FARM AND FIRESIDE, the best and clearest that can be made, enable them to see it.

We have a large number of great special articles that will appear in FARM AND FIRESIDE in 1917. There are too many to publish the list in full, but here are a few of them: "The Difficult Art of Giving," by John D. Rockefeller. Which is harder, to make money honestly or [CONTINUED ON PAGE 9]



"The Blue Envelope," our next serial, will begin in the December 16th issue. Photographs of Lillian Walker and a star movie cast interpretating the story will illustrate it

Feeding Stuffs

How Proprietary Brands are Bought, Mixed, and Sold

By B. D. STOCKWELL

HE business of preparing and selling mixed feed for live stock is a peculiar combination of manufacturing, agriculture, industrial chemistry, and skill in playing the grain markets. "There is a great deal more to skillful and economical feeding," said one manufacturer, "than most darrymen and feeders, even those who have spent their lives in the business, can realize. Every little while we meet a chemist or a professor or a herdsman who is an expert in some particular line of live. man who is an expert in some particular line of live-stock work, but he usually proves to have but a scant knowledge of the field in general.
"To feed any kind of live stock well and to know

you are doing it in the best way possible, you must be sure of the composition of the feed. It won't do to trust to the analyses found in books and bulletins. Certain bulk feeds like distillers' grains and cotton-

seed meal are extremely variable in composition. If the yeast used in the production of distillers' grain works just right, you will get one feeding value, but if it doesn't work right the value will be entirely

right the value will be entirely different.

"Ordinary distillers' grain may vary from about 14 per cent to 33 per cent in protein and from 6 to 16 per cent in fat. Most experts know that feeds are variable, but they seem to forget it when they figure rations on the basis of book figures."

This particular manufactur-

This particular manufactur-er, however, urges the study of rations and feeding values from books when judgment is used in drawing conclusions and when one understands how to interpret the different standards and adapt them to practical farm use. An understanding of energy standards, total nutrients, digestible nutrients, maintenance rations, and actu-

nutrients, digestible nutrients, maintenance rations, and actual rations can be readily secured from books on feeding and will make anyone more expert as well as help him to save money. The concern in question publishes a booklet containing the rations fed cows which have made high milk records and also giving feeding standards for different breeds and sizes of cows. "We are not advocating mixed feeds to the exclusion of farm-raised feeds," he explained, "but we think we can help farmers to get more milk from their cows if they will feed their cows rations that contain the elements from which milk can be easily made by the cows' digestive systems—in other words, a combination of farm feeds and mixed feeds. Most dairymen who have not studied the subject as carefully as they should, favor their cows too much. Instead of training a cow to like the things that cost the least money they feed it what the cow wants. It's like giving a child too much candy. A great deal of unprofitable feeding is caused by the belief that as long as a feed is palatable and the stock eat lots of it it must be a good feed.

The Methods of Miving

The Methods of Mixing

"No FEED is any more nourishing than the analysis indicates, and it must also be safe, economical, reasonably bulky, and must have a variety of ingredients so the stock will not tire of it. A farmer can mix up a feed and try it for a while and then decide he ought to throw something else into the animal. He'll keep this up till his stock may get sick or even die, and he won't think very much about it. He isn't sure won't think very much about it. He isn't sure it was the fault of the feed. But if he has fed a trade-marked mixed feed and anything goes wrong, he is pretty sure to blame the goes wrong, he is pretty sure to blame the feed. Cottonseed, and gluten especially, must be fed with caution. A safe ration that will keep the animal healthy is therefore the first thing to consider."

The home mixing of feeds has been suggested as a means of securing the desired variations of the securing the desired variations.

gested as a means of securing the desired variety in a ration and at the same time of saving the profit of the manufacturer, also freight and other incidental expenses. A simple farm mixer has been made just for this purpose, though it is equally well adapted for mixing fertilizers, seeds, and light dry mixtures of all kinds. The hopper is divided into four parts each of which has a regulating gate and an indicator, so that any desired proportions can be obtained in the final mixture. The size of machine illustrated is turned ture. The size of machine illustrated is turned by hand, and has a working capacity of a ton an hour. It takes the place of laborious shoveling, does the work more thoroughly, and delivers the mixture into sacks or other convenient receptacle. It sells for \$40, and the manufacturer asserts it will pay for itself in a short time.

Such a machine will no doubt earn its way because of the variety of labor-saving work it will do, but as far as the economy of homemixed feedstuffs is concerned, too hasty a conclusion may be incorrect. A large manufacturer of dairy feeds, whose daily output is 500 tons a day, outlined his cost of doing business, and also his methods, briefly, as follows: "One of our products contains nine different feeds and our power cost of mixing and grinding is from 4 to 10 cents a ton. We are fortunate in having cheap electric power. If we had to depend on steam and maintain a power house, it would be a great deal more expensive. The same work done by hand would mean a labor cost of about a dollar a ton, which would be prohibitive."

The operation of a modern feedstuffs plant is a matter of some interest. One is managed in this manner: The cars of grain and by-products used in the manufacture of feed are sampled in nine different places for each carload. The cars are then unloaded, and the grains are elevated and placed in large bing. When the analyses of the different in large bins. When the analyses of the different ingredients are known, they are drawn off through



This is a feeding-stuffs establishment with a capacity of 800 tons daily. Most such mills and warehouses are located near large grain markets

gates which accurately control the flow, and pass into a screw conveyer which violently agitates the mixture, making it look, as one observer expressed it, like Niagara Falls.

"Feeding stuffs," said the owner of this business, "are under strict registration laws, and everything that goes into our feeds is tested. We make about 7,000 analyses a year, and the cost of this testing is more than the cost of mixing. But even if the laws and inspection were lacking, there is every incentive toward building up the quality of trade-marked goods. We must make our product as good or better than our competitors' if we expect to get our share of the business. Our product must be uniform. A ration should not be allowed to change with every turn of the market, or the cows will shrink in their milk.

"Now, when a man undertakes to mix his own ration, what does he do? He buys straight feeds. Take cottonseed meal as a common example. There are a great many different grades of cottonseed meal, and the man who is looking for a low-priced feed is sure

This hand mixing-machine will combine four different ingredients at the rate of a ton an hour

to get a low grade. The demand for cheap feeding ingredients has caused the quality to be gradually whittled down. Consequently the farmer nearly always works with feeds which are poorer than he believes them to be. He does not get adequate state protection because inspectors do not go to a farmer's harm to draw samples and even if they did it moved. barn to draw samples, and even if they did it would be hard to get a complete chain of evidence. A farmer has no facilities for having his feed analyzed, and he doesn't know what he is working with. We make our analyses at a cost of about 10 cents for every ton of feed.

Basis for Judging Values

"EVEN the natural grains will vary. Corn last sea-son was low in fat. The feed manufacturer can adjust his business to such conditions because he has adjust his business to such conditions because he has so many different ingredients to select from. We maintain that under the present grain prices a farmer can save money by selling his cereal crops and buying mixed feed. Corn meal, oil meal, and cottonseed meal will all he high this winter, but, on the other hand, the glucose factories are running heavy and are turning out products which will take the place of corn. Distillers' grains are likely to be low. "Corn has become costly, largely due to the demand for pork and beef.

The country is prosperous and will have those meats at almost any price. This puts corn on a meat basis, and the dairy business will have to fall back on other things. Unfortunately the barley crop is also short. If it had been heavier, some of the barley could have been used to replace corn meal. The flax crop is short, but we can import Argentine flax."

The facts in the last paragraph may seem somewhat off the subject, but I give them to show how closely a feeding-stuffs manufacturer follows the world's crop conditions. Nearly all the large feed mills are located near large grain centers and have ample railroad facilities. And the offices are frequently close to the board of trade building. This brings up the financial side of the business.

"Manufactured feeds would be all right," a thoughtful so many different ingredients to select from. We

the business.

"Manufactured feeds would be all right," a thoughtful feeder remarked to me the other day, "but we can't afford to buy them. They cost too much money. When I go down to a feed store to get a few bundred nounds or even a ton such mills and
of feed, the prices take my breath away. If four or five farmers would club together and buy their feed in carload lots, it would be a good thing, when feed is scarce on the farm."
This is a matter which is too broad in its score to

when feed is scarce on the farm."

This is a matter which is too broad in its scope to be debatable with the idea of passing judgment here, but let us hear what there is to say on the other side.

"The correct basis for figuring the cost of feed," the president of a large feeding-stuffs concern remarked, "is the cost of digestible nutrients per pound. Some feeders have formed the habit of figuring just the cost of protein because that used to be the most valuable element, but nowadays protein is no more costly than starch. For four years protein feeds in the East have averaged less costly than corn meal.

"Therefore, to judge a feed you must consider what you are getting in the form of carbohydrates and fat as well as in protein. Profits in the feedstuffs business are made by a large volume of business and by taking advantage of favorable turns of the market rather than charging prices that are unjustly high. Feed is handled on a smaller margin than coal, ton for ton. The retail feed dealer who buys in carload lots can sell as cheap as the manufacturer can in less than carload lots, the difference in freight rates being the dealer's gross profit. In some cases where the dealer will not handle the kind of feed the farmer wants, the farmer is forced to go direct to the manufacturer. The manufacturer is not prejudiced against selling to anyone who is responsible, but most feed is sold at retail on credit."

manufacturer is not prejudiced against selling to anyone who is responsible, but most feed is sold at retail on credit."

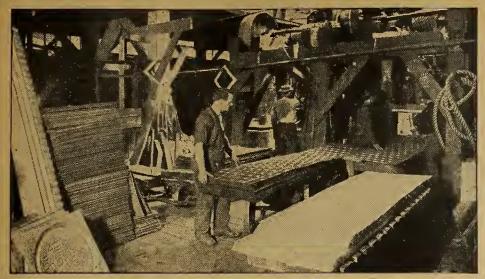
In answer to questions on the present magnitude of the feeding-stuffs business, this manufacturer shook his head. "As far as I know, accurate figures have never been compiled," he said, "but here are a few smattering facts that will give a little idea. In 1914 close to 2,000,000 tons of molasses feeds were used in the United States. In Chicago alone, 15,000 tons of poultry feeds are prepared monthly." monthly."

Briefly, the mixed feeding-stuffs business is based on the difficulty of the average man to maintain an economical ration from the products of his own farm. He may be an expert if he chooses to study out a new ration every time the market changes, but he prefers to let someone who makes a business of mixing feeds do it for him.

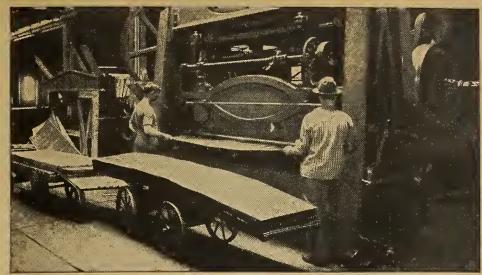
But no doubt the majority of users of mixed feed begin to buy it because of a shortage of forage and grain crops on the farm.

In time the use of mixed stock feed becomes a habit just as the use of package breakfast foods becomes a natural habit in the home. Whether this is a good thing or not from the standpoint of good farm management is a matter on which the opinions of FARM AND FIRESIDE readers are invited.

EDITORIAL NOTE: If you have a feeding problem of any kind, address the Live-Stock Editor, FARM AND FIRESIDE, Springfield, Ohio. Mention kind and number of stock and give a list of feeds on hand.



Stamping metal shingles before they are galvanized. The sheets are two feet wide and of various lengths up to twelve feet



This machine stamps a side lock on the metal sheets, which later covers all nail heads and makes the roof storm-proof

FRIEND of mine had just built a house and was congratulating himself on the plastering. He had been careful to select a good man to do the work, for he knew that many other-wise well-built houses had been ruined by poor plastering that flaked off, cracked, and even fell

flaked off, cracked, and even fell down after getting wet from water that was accidentally spilled on the floor above. But the plasterer, who had seen years of experience, was not so elated. "Yes, I've given you the best patent plaster," he remarked, "and it will set as hard as cement and will never give much trouble. But the only kind of plastering I can guarantee against cracking is plaster that is put on over metal lath. Any kind of wood lath will absorb moisture from the plaster before it thoroughly sets. That weakens it some. Besides, your wood lath is bound to swell and shrink a little with the weather.

"In a year from now," he told this man, "there will be little cracks in this plaster just as you see in most houses that haven't been papered. You'd be surprised at the amount of papering done just to cover up cracked plaster."

cracked plaster.'

This house owner has found the plasterer's prediction true, and is planning to have metal lath in his next house. That is just one instance of the way metal may be used to advantage in almost any kind

As a roof covering, metal comes both in the form of plain sheets and stamped to resemble clusters of shingles. Steel is the metal chiefly used, since tin, copper, and other rarer metals have become almost prohibitive in price.

The cheaper grades of steel roofing are ungal-

vanized, and corrosion is supposed to be prevented by paint. Such a roof will give fair service as long as the paint protects the metal, but as soon as the paint wears off the roof must be promptly repainted or rust and corrosion will begin. But as a first-class job of painting cannot be done during bad weather, a roof may suffer considerable damage before the paint can be applied.

Test for Good Galvanizing

CONSEQUENTLY a galvanized roof is more satisfactory and for permanent buildings is a better investment. The spelter used in galvanizing cannot rust, and if a properly galvanized roof is laid according to directions it is one of the tightest and most durable of all kinds of roof coverings. The simplest test of good galvanizing is to bend a small piece of the galvanized metal backward and forward several the galvanized metal backward and forward several times to see if the coating of spelter will flake off.

Such a test is useful in comparing samples of several kinds of roofing. But even the best grades of galvanized metal are benefited by the added protec-

Building With Metal

New Developments That Insure Added Durability

By D. S. BURCH

tion of paint. "When a roof is laid," a roofing expert remarked, "a careless blow of the hammer may displace a particle of the spelter. This may be so small as to pass unnoticed at the time, but it gives a foothold for rust to start. However, if the roof is painted as well as galvanized the paint will protect just such places. New galvanized metal has a greasy surface, caused by the sal ammoniac used in the galvanizing process, so it is best to let a new roof weather for six months. It will hold the paint much better."

Painting a metal roof is surprisingly inexpensive



Garage roofed with metal shingles, and sides stamped to resemble rock-faced brick

compared with the ordinary job of painting over wood, since the metal is non-porous and a gallon of paint will cover about twice as much surface

The success of metal as a roofing material is due largely to a number of improvements which make the sheets water-proof at the seams without requiring solder or cement or any special skill in laying. But regardless of your experience with metal roofing

in the past, you will make a mistake in disregarding instructions for laying some of the more improved kinds. One style, for instance, has an interlocking joint

stance, has an interlocking joint designed in such a way as not to collect moisture of any kind. Even surface moisture such as dew or melted frost is prevented by the construction from being drawn up into the seam by capillary attraction. Such capillary moisture is one reason why cheap wood shingles rot and mold just underneath the butts. But one man who laid the kind of metal roofing mentioned hammered down all the joints instead of letting them alone. This battered the seams, causing moisture to collect, and in time the roof leaked, a fault due to misapplication. Certain makes of roofing have joints which completely cover the nails which hold the roofing on, and which also allow for expansion and contraction of the metal.

the metal.

In one respect metal is especially desirable as a roof covering for barns so many of which are struck by lightning during the months of July and August. Here is the reason: Hay in a mow during these months gives off a great deal of moisture which rises and makes a column of varior which is a great con and makes a column of vapor which is a good conductor of electricity. During a thunder storm, lightning naturally follows the easiest path. Consequently it follows the column of vapor and strikes the barn.

Lead Washers Prevent Rust

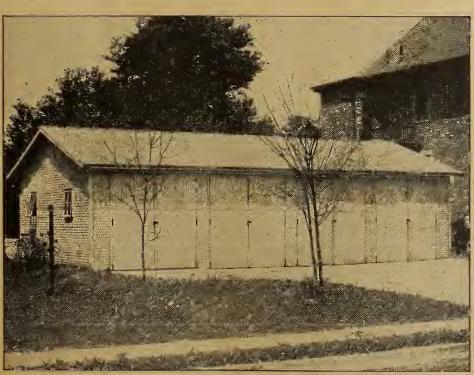
A METAL roof connected to moist ground by cables—like those used for lightning rods—sheds electricity just about as it sheds water. Some metal roofs are now sold with an ironclad guarantee against damage to the building by lightning.

For the same reasons mentioned for roofing, metal siding is also coming into a wide general use. Granaries, grain elevators, workshops, and garages are often sheathed with metal, as it is reasonably fireproof and also keeps out rats. Various methods of nailing sheet metal to a wooden framework have been tried, and one of the most successful is the use of a small lead washer between the nail head and the metal. This makes a tight fit and keeps the moisture from the nail hole. Always use galvanized nails.

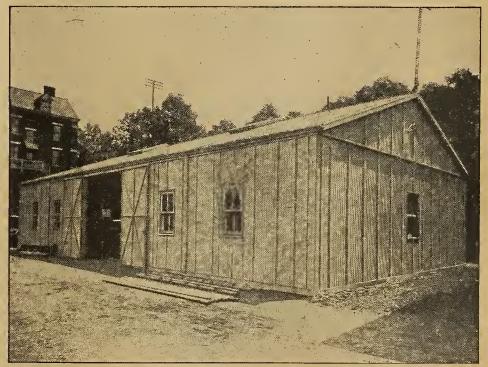
An ingenious form of garage construction, in which

An ingenious form of garage construction, in which concrete, wood, and metal are all used, is known as "stucco-steel." This garage has a wood framework which is cut to fit. The outside of the building is a combination of metal studding and metal lath. You erect the framework in the desired place and then give the metal lath two coats of cement plaster just are in any job of stuccing. as in any job of stuccoing.

EDITORIAL NOTE: For further information on metal construction of any kind address Farm Equipment Editor, FARM AND FIRESIDE, Springfield, Ohio.



A metal building of this kind, with its four double doors, will conveniently house the farm tractor, automobile, and large farm implements



This style of sectional building is suitable as a combination blacksmith shop and storehouse. Make it any size you please

A Plain Statement of Fact

Mogul 8-16: \$725 Cash f. o. b. Chicago

A T the present prices of gasoline and kerosene, no farmer can afford to use a gasoline tractor. Gasoline averages now over 100 per cent higher in price than kerosene and is likely to go higher

rather than lower, according to men who know the oil husiness.

Again, it is neither safe nor economical to use kerosene in a tractor not specially designed to operate on kerosene. Merely changing the fuel mixer is not enough; the design of the whole

Mogul kerosene tractors and gasoline tractors of equal power sell for ahout the same price and use practically the same amounts of fuel. On that basis a Mogul 8-16 tractor saves each

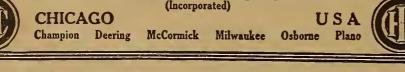
year, in fuel bills alone, about a third of its price.

If you are considering the purchase of a tractor this year, give these facts careful study, from every point of view, before

wou spend your money.

Mogul tractors are designed specially to operate on kerosene and to give their users the full benefit of this advantage. There are two sizes—Mogul 8-16 and Mogul 12-25. Write us for the story of kerosene hefore you huy any tractor.

International Harvester Company of America





This efficiency in selling, and the marvelous saving methods in the Factory, added to the volume of sales, gives you Firestones for what ordinary quality costs. Don't wait to take advantage of these savings. See your dealer now.

Free Offer A Firestone Cementless Tube Patch Free, if you will send us your dealer's name, and the make of your tires. Ask also for copy of our book, "Mileage Talks," No. 45.

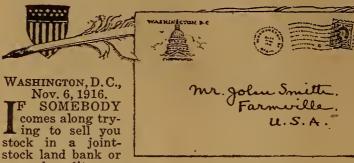
FIRESTONE TIRE AND RUBBER COMPANY, AKRON, OHIO "America's Largest Exclusive Tire and Rim Makers" Branches and Dealers Everywhere



Financial Changes

Loan Law Provides Two Ways to Borrow

By JUDSON C. WELLIVER



a rural credit association or any other financial institution that is going to be operated as an adjunct to the federal farm-loan system—Don't. Maybe it will be perfectly all

right, but don't be too sure it is. Don't sign your name to an application for stock, and don't separate yourself from any of the necessary, until you are sure. The way to be sure is to ask the Federal Farm Loan Board.

Not long after it was organized the board issued an announcement that no institutions would be chartered by it to operate under the farm-loan law, whose organization had involved any promotion expenses.

Manifestly, if promoters and managers and speculators are to rake off a handsome profit from "rural credits," somebody will have to pay that profit.

somebody will have to pay that profit. The very aim and purpose of the law was to cut out big profits and big expenses in doing the business.

Of course, there is a place in the system for the joint-stock land bank conservatively and honestly managed. There are many such in existence today, doing a good business. Many of these banks will undoubtedly reorganize under the new law. It is against the under the new law. It is against the promoter who promises large and speculative profits from the formation of the new land banks that we wish to warn

Let's see what basis there is for any claim for extraordinary profits. Under the law a joint-stock land bank is one whose capital is furnished by investors, as distinguished from borrowers. Its minimum capital must be \$250,000, and it is in the organization of banks of this class that the promoters have been par-ticularly active ticularly active

A bank of this class will be allowed to loan its capital on farm mortgages, and then issue its bonds, called joint-stock land bonds, which will be secured by the deposit of the farm mortgages. In this way it gets its money back, and can proceed to loan it again and then issue more bonds, and so on until it shall have loaned its entire capital fifteen times loaned its entire capital fifteen times

and issued honds as many times.

At the end of that proceeding it would have outstanding \$3,750,000 of bonds. If the bonds had heen sold at four per cent, the mortgages would be drawing not over five per cent, for the law spe-cifically forbids that the farmer's inter-

est rate shall not exceed that on the bonds by more than one per cent.

Now, assume that this bank has loaned its capital fifteen times over, and that its margin throughout was the full one per cent, what would be its posi-

\$2,500, or \$37,500. Out of that \$37,500 the bank must pay rent, salaries, and all incidental expenses. It is responsible for any losses on account of mortgage defaults. The best financial judgment is that if these banks earn six per cent net per annum they will be doing very well. Congress didn't intend that they should earn high returns. It didn't want them to be too attractive a morsel for investors, and the reason is that Congress really didn't want the bulk of morey to be loaned. want the bulk of money to be loaned through these banks.

WHAT Congress wanted, and what the Farm Loan Board wants and expects, is that loans will be made chiefly through the co-operative loaning associations which the law provides for. It is believed that these will on the whole be cheaper to operate, and therefore will be able to loan at lower rates, than the joint-stock land banks.

Moreover, the co-operative loaning association idea makes the farmer his own financier; it makes him more inde-pendent, less likely to rely on somehody else to take care of him; it will familiarize him with financial methods.

Now, a co-operative loaning association is nothing whatever except a country building and loan association for return on capital invested.

farmers. The member buys \$50 of stock for every \$1,-000 he intends to borrow from the association. This \$50 is invested in

federal land bank for that district. Fifty dollars is one twentieth of the loan, and the federal land hank is permitted to loan up to twenty times its

So this payment of \$50 on every \$1,-000 loan creates additional capital in the bank, which becomes the basis for another \$1,000 loan, thus creating the endless chain that keeps the thing going so long as there are huyers for the bonds. And there is the best of reason to believe the bonds are going to sell freely, at prices that will make it pos-sible to loan to the farmer at five per

The long and short of the business is that the law provides two ways of get-ting the farmer money. He may borrow through the co-operative loaning associations or through the joint-stock land banks. Either one benefits by the privi-lege of selling bonds against the mortgages held by it.

MOREOVER, there is nothing in the argument that it is going to be difficult to bring the needed ten borrowers in a given county together in forming a co-operative loaning association. If the co-operative loaning association. If the co-operative loaning association is not formed within a year after the plan becomes effective, then the farmer desiring to horrow can apply to the district farm-loan bank for his district, explain that there is no association and explain that there is no association, and ask that the bank send an agent to receive his application, appraise his prop-

erty, and report.

The policy of the federal loan law, in short, is to steer the business into the channels of the co-operative associations, and the Farm Loan Board is in the fullest sympathy with that policy because it believes that in the long run this policy means the cheapest money this policy means the cheapest money for the borrower, and that is what the Federal Farm Loan Board desires to do—lend money at the cheapest rate

possible.

All this does not necessarily imply that there is no place in the system for the joint-stock land bank. There is a place, and it may prove an important one. Almost every county-seat town, and most others of moderate size, possesses a firm, agency, partnership, or small bank that carries on a big farmlean business. loan business.

Such a loan concern has been in existence maybe many years; has an established clientele of both loaners and borrowers; possesses the confidence of both groups. The people who buy mortgages from it for investment may have a contract contract. been huving them for a quarter century without ever inspecting a single piece of One per cent on its \$250,000 capital without ever inspecting a single piece of would be \$2,500. So every time it reinvested its capital it would have a profit have confidence that that firm or bank of \$2,500 in sight, loaning it fifteen knows its business and would not be offering them something that wasn't good.

On the other hand, borrowers from that agency have found it accommodating, resourceful in the matter of getting money when wanted, always ready to "take care of its customers." The concern may have disposed of mortgages for many times the amount of its actual

for many times the amount of its actual responsibility. Its customers would like to continue doing business with it as they have in the past.

Well and good. The law opens a way for keeping that agency in business. It may, with practically no cost, reorganize itself into a joint-stock land bank underthis act, and go right ahead with its business. Thus reorganized, it will not be allowed to loan except under the terms of the law; it cannot charge the farmer, in expenses, commissions, etc., more than one per cent above the rate at which it can sell bonds. But it can protect its established business by becoming a bank and doing business withcoming a bank and doing business with-

in this law.

Such established businesses will be able, if they start with a good volume of transactions already existent, and with assurance that the endless chain will go right on working because their contracts have confidence in them. customers have confidence in them, to retain their business and earn a modest

The Editor's Letter

How Many Acres for a Living



HAVE a letter on my desk this morning from a young married man who lives in

one of the cities on the Great Lakes. He has been making a comfortable living as a shopworker, but has lived up practically all of his income. He recently came into possession of a four-acre farm on the edge of what he styles a "dead" town of 3,000 population, 30 miles from his former home, a city of several hundred thousand inhabitants. The farm has a good house and fair outbuildings on it. With ownership of the little farm came the problem of what he should do with it. Should he cut loose from his city "sure thing," with its weekly pay envelope of \$16.50, and tackle intensive farming on four

But let us quote from his letter: "I have had four years' farming experience have had four years' farming experience some time ago, and know the handling of chickens in a general way, but have no special knowledge of growing truck crops, small fruits, and the like for special trade purposes. I should like some light on my problem of what I might expect to make on my four-acre farm, should I throw up my present job and take hold of the little farm proposition for all there is in it."

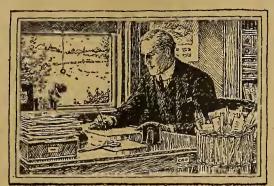
Our learned farm economists have

Our learned farm economists have worked out elaborate calculations which show conclusively that under the pres-ent high cost of labor and the use of improved farm machinery a farmer should own or control 250 to 350 acres of tillable farm land in order to make the largest proportionate profit for the time and labor expended. In other words, a capable farmer must do an extensive business if he wishes to reduce overhead expenses to the point where it does not eat up farm profits. Expensive machinery and motor power must be kept busy most of the time, otherwise there is no profit in them. Hired hands must be organized into crews of just the right number to handle the work properly, and must then be kept up to speed so there will be no lost motion. of tillable farm land in order to make lost motion.

These expert farm economists are right, too, if the last dollar of profit is to be squeezed out of a farm investment. But wait a moment. A 300-acre farm of only \$100-an-acre selling value and one half as much more capital invested in stock and equipment cannot be bundled together by every family having a hankering for a chance to earn an hon-est living from the soil. So what are we going to do with the man who cannot hope to get a chance for owning or op-erating the big farm advocated by the farm economist? Has he got to stay out of farming all his days just because he can't control a 350-acre farm? It is the same old question which constantly the same old question which constantly bobs up and will not down.

IN MY judgment, there is every reason to think that this man, now only making a comfortable living with no prospect of saving for a "rainy day," has a chance for bettering his condition on his little farm—provided he is the right man for a high-tension, small-farm job. With four good acres of land free of debt, good buildings, and within an hour's shipping distance from good city markets, there is an attractive future in just such small farms if the owners measure up to the job. I know a score or more small farmers who are making gross incomes of from \$1,000 to \$2,000 from little farms of four or five acres. One of these is operated by a man over seventy years of age, who has been taking from \$1.100 to \$1.300 year after importance of the selling end. Swarms year for twenty years from one and onehalf acres, mainly from gooseberries and strawberries. A cow, a pig or two, poultry, and garden truck sufficient for family use has enabled this family to live comfortably and to build themselves an attractive, up-to-date house and outbuildings with all modern conveniences. This has all been accomplished from the income from one and a half acres, and there is always something left over

Of course, this is an exceptionally favored case, but I could tell you of a dozen others, more or less successful, where the farm is no larger than that of the shopman whose problem is before





us. But if we analyze the cases of these small, intensive farmers who we know have succeeded, the majority of

them will show that the successful farmer is born, not made. Not that anyone cannot learn a lot about such a problem, but the "stuff" must be in the man. He must have indomitable courage to do painstaking work in the best possible way. He must get results, and get them at just the proper time, so that he can market his produce at the best possible prices. A few days' time lost may mean a loss of all the "velvet" on some one crop. A few days gained may enable him to top the market.

AIMING for profitable results from a few acres, the intensive farmer must keep up with the procession. He must have a passion for stamping out disease and insects. In fact, to secure a \$1,000 to \$2,000 income from four acres is a man-size job in the producing end, and a much bigger one in the marketing of the produce. Thousands of successful quarter-section and half-section farmers would be close to starvation on a first-class four-acre farm free from encumbrance, in six months. This man is cumbrance, in six months. This man is fortunate in being able to try out this experiment without much chance of serious loss, but he will make mistakes and need loss, but he will make mistakes and need help, no doubt. He has acted promptly, and is already on his little farm and planning to make mushroom-growing a part of this winter's work.

There is something interesting and inspiring in compelling Mother Earth to deliver up a good living for a family from a half-dozen acres or less. It isn't much like wheat-farming in the

from a half-dozen acres or less. It isn't much like wheat-farming in the Northwest, nor like corn-raising in the corn belt, but it's farming just the same. I feel certain a large number will read this letter who belong to the Guild of Big Little Farmers. Write in and tell me how you do it. I'll pass the good word along. Every time I learn what these intensive fellows are doing, I have a new conviction that all is still well with the world.

THE report of a timber-selling trans-action in Maryland has just reached action in Maryland has just reached me. It carries a significant lesson. The owner of a woodlot needing some ready money received an offer of \$1,500 for the timber on a part of his tract from a local company. This sum seemed too low a price to the owner, so he secured the services of a trained forester to make a valuation of his standing timber. The estimate showed that the price offered by the local concern was too low. The tract of timber was then publicly advertised. Among the bids received was one from the same local company raising their offer to \$4,500. A little later the tract sold for \$5,500.

This incident brings distinctly to mind a youthful horse-selling indiscretion of my own which afforded a nice plum for the dealer. A young coach

tion of my own which afforded a nice plum for the dealer. A young coach horse of unusual promise which I was training attracted the attention of a horse buyer from a neighboring city. His final offer of \$225 proved too much of a temptation to me, so he got the horse. As the sale was concluded the impression remained that I had acted too hastily and that other horse buyers should have been allowed a chance to bid. Two weeks after the sale, news came that the young coacher I had so painstakingly trained and made waywise had been sold by the dealer for \$750.

Both of these incidents emphasize the of dealers, jobbers, and commission men, with comparatively small invest-ments, wait and watch for the producer who is not informed as to values, or who is cramped and must "cash in" at any sacrifice. If we make a systematic canvass of any farm community, the majority of the farmers who are getting the best returns for labor and capital invested are the ones who are now giving even more thought and study to the selling than to the producing end of their business.

The Editor

The Flavor Lasts—

In the making of Grape-Nuts there is added to the sweet, rich nutriment of whole wheat, the rare flavor of malted barley, a combination creating a most unusually delicious taste. The palate never tires of it.

People everywhere have found that

Grape-Nuts

is the most nutritious and delicious cereal food known.

Every table should have its daily ration of Grape-Nuts.

"There's a Reason"





Try Neolin Wear-Prove Neolin Saving



Would you reap with a cradle when you had a mod-ern harvester at hand? No sane man would.

Yet, just as the giant harvester is to the old-fashioned reaper, so is Neōlin to the leather-sole.

Neōlin is a modern, scientific shoe-sole. It is a new, wonderful material—unlike rubber, unlike leather.

It is better wearing than good leather and better by far than any leather you may now be wearing.

Test it by work, on rough road or stubbled field.

Test it over months of work. See how it still makes good when your leather-soles are in the scrap-heap.

And Neōlin is as good for women as men-and as good for the children as for either.

Look to it for waterproof quality, for instance — and for looks. Its looks alone recommend it for Sunday

Ask for Neolin on new shoes or as soles for old ones. Get it at retailers or shoe-repairers who have it or can get it. And mark that mark; stamp it on your

the trade symbol for a never changing quality product of

The Goodyear Tire & Rubber Company

HARM IRESIDE

THE NATIONAL FARM PAPER

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November 18, 1916

The Day's News

O YOU study the geography lesson that the war news contains every day? and the history lesson? If not, you'll find them fascinating.

The greatest thing for educating the children, next to good and regular schooling, is the right kind of interest at home in their intellectual growth. An encyclopedia and the habit of using it is a whole educational system.

Roumania joins the allies. Where is it? Who are its people? How did they. get there? You can learn all about them, for ordinary purposes of general information, in a half-hour. Greece is going to enter the fight. Did you know that, two generations and more back, France, Russia, and England—the allies of to-day-stood together to gain Greece her freedom? Or that it is a wonderful story of the rebirth of a nation after many, many centuries? Or that the Greeks of to-day use a Greek language that is more like the classic "dead" language of Pericles and Aristophanes, than our English is like the English of

The day's news is full of interesting suggestions of themes with immediate interest. Get into them, and get the youngsters into them. The reading habit will make more happiness and earn more real profit than any other mode of enjoyment.

Farm versus City

THE time of year is fast approaching I when many a farm boy and girl will start out for the city to spend the winter working in office, shop, or factory. Perhaps you have heard rumors of some such plans in your own household, and perhaps your John or your Mary has answered some of the help-wanted ads in the county-seat or nearby city paper. Well, a winter in town won't do them any harm if their home training has been good and the farm home pleasant.

If you parents have made the farmhouse as bright and cheerful as the average city boarding house, if the girls have had washing machines, running water, acetylene or electric lights, oil stoves in summer, coal stoves in winter to make their work easier and their hours of recreation happier, if the boys have had a well-equipped workshop, modern machinery, good live stock, to work with, and a real if small financial interest in the farm, you needn't worry about their coming back to the farm when the first taste of city life is over. The farm will hold them or get them back if the farm is as it should be.

"Pedigreed Goods"

WHEN you want to raise good stock, you pick your breeding animals from a registered herd. They are known by their performances. They have reputation behind them. Their owners will not work any substitute animal off on you, for his reputation and the reputation of his breeding stock would be at stake. In other words, you are buying "trade-mark" goods.

And it's just the same in the case of silos, engines, tires, stoves, plows, sepa- in city or town.

rators, stock feeds, building materials, clothes, shoes, and package foods. The goods that are trade-marked, that are advertised, have reputation behind them. By luck you may get a good calf from a scrub cow, and by luck you may get good merchandise that is unbranded and unadvertised. But the wise farmer looks for the trade-mark on everything he purchases.

Wheat Embargo?

Y/HEAT approaching \$2, and petitions being circulated asking that an embargo be placed on wheat, forbidding any more exports.

Copper at figures mounting well toward 30 cents a pound; steel, iron, and a hundred other things are all higher in proportion to normal conditions than wheat. But who talks of an embargo

than anybody else in American business, a thundering sight less; and yet when he gets in sight of cashing in a little of the high-prices prosperity that is being passed around, he is the first to be marked for reprisal-by some people. Of course there will be no wheat embargo. Somebody with horse sense will head that off. But the spirit of it is calculated to make farmers

A New Labor Problem

THE agricultural, and to a consider-Lable extent the industrial, South confronts a new labor problem. Contractors and employing corporations are scouring that section, gathering up negro laborers, and transporting them to the North and West to work at wages that look highly attractive. The South needs its labor, and is coming to appreciate the black man better as he takes his flight.

A few years ago a conference of Southern leaders was held with the view to securing for that section a larger share of the immigrants arriving in this country. It was boldly declared that white immigrants were wanted to displace negro workers; the anti-negro agitators affected to believe there was a chance ultimately to establish white as the standard labor of the South. Of course, had it worked it would have resulted in leaving the black man out of a job, a charge on the community. The new migration northward may produce some of the same effects without such The black disastrous consequences. man is better off as an agricultural worker than in any other capacity. All the authorities agree that in the long run he will develop best in the country.

The Happy Farm Hand

GOOD deal has been heard lately A about the advance in labor costs of all kinds of production.

It may surprise many people to learn that authorities suspect that the farmer's labor bill has increased, in proportion, more than that of any other employer. In the last ten or fifteen years farm labor cost has easily doubled in many sections. The hired man is drawing down not only a living that represents very much more in money value than it formerly did, but from 50 to 100 per cent more wages. Counting in the added value of the "found," which is part of his compensation, along with the increased money payment, it is calculated that he is getting along toward affluence faster than any other class. His hours of labor, too, are being shortened. Better equipment, and more of it, makes his work easier. In the not distant future a system of individual rural credits will make it possible for the thrifty farm laborer to establish himself, first as tenant and then as landed proprietor. The farmhand has a pretty good thing if he will just compare his situation and opportunities with those of the average laborer

Danger of New Riches

FINANCIAL authority recently de-A clared that the wealth of the United States has increased fifty billions of dollars since the war began. That would make 50,000 men millionaires; and anybody who will figure on advances of valuations of land, stocks, bonds, everything, will be convinced that it is not far out of the way. Before the war the best estimate was that this country was worth one hundred and fifty billions of dollars.

But is it possible that one third has been added to our national wealth? Haven't we just been marking up the prices to new high points, and calling ourselves richer. Over on the other side of the balance sheet, what about bigger expenses for living and luxuries, amusements, gratifications of all kinds?

We are a lot richer, as a nation, but The farmer has had less coddling not so much richer as the price marks would indicate. There's a good deal of money madness in this community right now. It's a good time to keep on the safe side; to maintain a comfortable reserve; to avoid spreading out too much. There is always a reaction from such a period of inflation, and it's a powerful lot easier to mark prices up and feel rich, than later to mark them down and admit that you aren't so rich after all.

> This country isn't any too popular with the rest of the world just now. If all the people in your neighborhood were quarreling and destroying their property and lives, while one man just outside was gathering in enormous profits as result of their folly, that one lucky and thrifty individual wouldn't be much liked. It's just human nature. That man would need to carry plenty of insurance, and to keep a sharp eye out. So does Uncle Sam.

Our Letter Box

How to Get a Farm

DEAR EDITOR: I have read with much pleasure your letters to the young men of \$2,000 and \$3,000 capital. It is a big question for them to solve. I have question for them to solve. I have traveled this route with good luck, and have several fine farms that I rent. My experience may differ from others, but find that a good worker with no bad habits can own his own farm to-day better than ten years ago. V. Prices are so good on all produce. he young man make a contract for his farm at say \$65 to \$75 an acre. Then take the \$2,000 and buy 20 good two-year-old heifers and a good beef-breed stock bull. These will cost him \$900.

Let him raise the young stock from Let him raise the young stock from this bunch for three years, making the farm feed them. Clover is cheap, fodder corn and millet is always good. Take the other \$1,000 and buy 40 yearling ewes and a good ram. He now has stock enough, with reasonable grain and roughage, to yield him a nice bunch of money. In the fall the calves should be worth \$500, the ewes \$100, the lambs \$250. This will pay the interest on a farm of 160 acres at six per cent. Thus the young man has a nice surplus of the young man has a nice surplus of ground to raise corn, alfalfa, and grain, as the cattle and sheep will live well and not use more than 80 acres of the farm during the grass months, and the corn fodder will carry them well through the winter.

On my farms I depend largely on corn fodder for my year's feed. I keep on the half-sections about 100 hogs, 20 colts,

and 70 cattle. They make plenty of money and I am sure the renter has done well. For the last ten years I feel sure that a person with \$3,000 has no reason to feel that it is doubtful about his being able to own a good farm. A. A. Moore, Colorado.

On Cut-Over Land

DEAR EDITOR: Lumbermen and farmers are clearing the timber from thousands of acres of land over the East every year. This usually is hardwood timber—oak, ash, chestnut, etc.,—and the size of the trees, together with their kind, denotes that the soil is rich and productive. Too often the stump land is sold for a dollar or so an acre. A great deal of this area, with little work and in one year's time could be put into and in one year's time, could be put into condition so that it would sell for \$50 to \$100 an acre, or even more in exceptional cases.

The cleaning up is done partly by the

lumbering crew, from time to time during the cutting job, when there are de-lays at the mill or otherwise, and partly by special men hired for the purpose. The cost will average about 25 cents a stump for the ones big enough to demand blasting, taking them all, big and little as they may

little, as they run.
On most cut-over land, stumps less than eight inches in diameter usually can be upset with a couple of teams on a chain. Use a hundred-pound steel hook to grab the roots when you are hauling them out in this way. It saves the time needed for hitching a chain, and gives the horses a better pull.

Here is the amount of powder I used for different sizes of stumps: Twelve-inch stump, two sticks; 15-inch, 2½; 16-inch, 3; 18-inch, 3½; 20-inch, 4; 24-inch, 4½; 30-inch, 5½. If you use an electric blasting machine you can re-duce this somewhat. Don't attempt to blow out stumps with ordinary 40 per cent dynamite. Get the cheaper, but more effective farm powders, which have a gas action especially designed

ANDREW MATTERN, Maine.

Putting Away Seed Potatoes

DEAR EDITOR: Place in any sized box a layer of perfectly dry straw, and then a layer of potatoes; repeat straw and then potatoes. I have done this four straight successful years. It is not necessary to take them out until ready for planting. They will not sprout if this

GEORGE O. BUCHANAN, Ohio.

Farmer Renter Speaks Out

DEAR EDITOR: We hear and read much about unsatisfactory results of the present tenant system, and as yet have not heard of a decision as to who is to blame—the landlord or the tenant. We were renters for several years, and my opinion is that in most cases both are to blame.

One common excuse given by most Southern tenants for their condition is that the landlord will not allow them to raise but little else except cottor and with supply bills and doctor bills to pay, after these and the rent are paid, they have no money and nothing toward living at home. Of course, this is the inevitable result of the one-crop system of farming, but is an entirely unnecessary condition.

It is the custom in the South to rent land for one fourth of the cotton and one third of the corn, the tenant furnishes the stock and feed and plants all but a small patch to cotton. We never but a small patch to cotton. rented land except for a stipulated amount of cash to be paid by November 1st, and we always tried to rent for a term of years. (The moving habit has too strong a hold on many tenants to ad-

mit of prosperity.)
Paying cash rent enabled us to plant whatever crops we desired, to gather as much of each as we wished, gave us the privilege of pasturing the fields we cultivated, and many times the sale of fat hogs and calves brought us more profit than we could have gained from the fields in any other way. We, too, the fields in any other way. We, too, had supply bills and doctor bills to pay, but the money from any other source was as gladly received by our creditors as that from the cotton, and many times the doctor was glad to take a nice porker, a few bushels of potatoes, a load of corn or hay. So that excuse for the one-crop system won't stand.

Another advantage of renting for a term of years is that a tenant will do more toward improvement, even with-out pay, because he knows he will derive some benefit from it. But the landlord will have to go through a process of improvement himself before existing conditions are greatly improved.

Someone is continually harping on the insanitation among tenants. Sanitary conditions are out of the question as long as the tenant houses and surroundings are unchanged. As a rule, no thought to comfort or convenience is

given.
To me it is no wonder that typhoid fever often rages in summer and pneu-monia in the winter. Such conditions menace health and invite disease. Convenience in the house and surroundings is the keynote to successful sanitary housekeeping. The most industrious housewife cannot safely combat flies, filth, and disease when handicapped by such inconvenience, and the labor ques tion will not be near a solution until existing conditions are remedied.

MRS. L. E. ARMOUR, Louisiana.

A Helpful Farm Paper

DEAR EDITOR: The September 2d issue of FARM AND FIRESIDE came in the mail to-day. I have been reading it. I think it is an interesting and helpful farm paper. While I enjoy every part of the paper, I am especially fond of the departments.

John Atchison, New York.

Our Fortieth Year

[CONTINUED FROM PAGE 3]

to give it away intelligently and help-fully? John D. Rockefeller, who has made more money and given more than any other man in the world, almost never speaks or writes for publication— which makes this article all the more interesting.

"The Blue Envelope," by Sophie Kerr. This is our next serial story. The first installment of "The Blue Envelope" will begin in the December 16th issue. Since we bought "The Blue Envelope," one of the large New York motion-picture companies has bought the moving-picture rights for the story, and has made it a five-reel feature film, with Lillian Walker as the heroine. We were fortunate enough to obtain photographs of Miss Walker and the other members of her Walker and the other members of her cast, in their interpretation of "The Blue Envelope," with which to illustrate

THAT Girl of Mine" and "That Boy of Mine," by Beatrice Brace, are two excellent articles, dealing with the very difficult "boy and girl on the farm" problem. It is only when we lay aside our added years and go back to our own boyhood or girlhood days that we can enter into our boys' or girls' real feelings or into their inner beings. To be able to teach and guide a child well, we must have the spirit of the child. Our boys and girls are the most precious possessions we have, and it pays to put our best into the human product.

"How Tenants Can Own Farms," by Harry M. Ziegler. A tenant who makes good and remains on one of the Cavanagh farms for five or six years will have money and credit enough to buy a farm for himself. He will be able to do this if he does as well as the Cavanagh tenants—told about in Mr. Ziegler's article—have done since the farms were tile-drained and heavily

Ziegler's article—have done since the farms were tile-drained and heavily fertilized with potash and phosphoric acid five years ago. It will be possible for him to buy a farm because he will have made a lot of money and will have gained the confidence of his local bankers who will lend him the money to complete the purchase of the form plete the purchase of the farm.
"The Country Church," by R. E. Rog-

ers. There are fewer country churches in existence every year. Last year statistics told us there were more than five hundred unused country churches in Ohio alone. The church Mr. Rogers attended until he was twenty years old was abandoned. The building was sold to a contractor recently for \$200. It cost about ten times that amount, but there was no use for the church there. small city within three and one-half miles and another thriving church within four miles could easily handle this congregation—and they did. Mr. Rogers tells about another country church built in 1903 at a cost of \$6,000 that is meeting modern conditions very successfully. They hold services twice each Sunday, a midweek prayer meeting, a monthly class meeting, a monthly business meeting with the young people's society, and other social affairs sandwiched in between these good times. Each year there is a home-coming, which includes various athletic events. The basement of the church contains a library. Banquets and socials are held library. Banquets and socials are held in the basement. The rooms are large enough so that games are always played by the young people after the dinners and socials are out of the way.
"House-Building Studies," by B. F. W. Thorpe. "The subject of house-building largest for me these days."

has especial interest for me these days, writes Mr. Thorpe. "I have been looking into the matter, as time permitted, for several months. For one in my circumstances the possibility of saving \$300 to \$500 in the cost of a house is a matter of no little importance. What I am trying to determine is this: Can I erect a ready out house and make the government. ready-cut house and make the saving that is claimed for this plan of construction and at the same time get a really satisfactory house?" This experience of Mr. Thorpe's is very interesting.

"THE Small Poultry Farm," by Mrs. Oscar Hornbeck. Mrs. Hornbeck's neighbors said it couldn't be done when neighbors said it couldn't be done when they learned she was going to keep 500 laying hens on less than an acre of land. The general verdict was: "To keep that many hens and have them continue productive and healthy year after year would require plenty of land so the birds could have a wide range." That was five years ago, and Mrs. Hornbeck is still running her poultry farm along the same original ideas.

"The Jointer-Colter," by D. S. Burch. Unlike many agricultural inventions, the combined colter and jointer does not make any of our present plows and tillage implements obsolete, but it is merely an aid in improving the quality of their work. The chief usefulness of

of their work. The chief usefulness of the jointer-colter promises, at this time, to be reduction in [CONTINUED ON PAGE 15]

"Let's Look in the Book and See!"

If You Can Use \$1,000 You Owe it to Yourself to Read This Carefully—We Offer \$3,500 to Those Who Name Fifty Pictures!

If you have read previous announcements concerning the Farm Implements Puzzle Game you know that we are going to divide \$3,500 among our readers who submit the best sets of title suggestions for fifty pictures.

Five of these—Nos. 21 to 25 inclusive—appear opposite. (Pictures 1 to 20 will be sent you free.) Readers will be given until February 20, 1917, to prepare sets of suggestions.

Each picture, as is indicated by the legend, is drawn to represent some familiar farm implement, or part, or term.

ment, or part, or term.

As FARM AND FIRESIDE has arranged the Farm Implements Puzzle Game to test the observation and ingenuity of its readers and not their technical knowledge, it has compiled a list of about 3 000 implements parts and terms

their technical knowledge, it has compiled a list of about 3,000 implements, parts and terms.

Originally this list was prepared to gather material for the artists. It has since been printed in book form, and is called the Farm Implements Puzzle Game Key Book.

The applicability of the term Key Book is obvious, for as ideas for the pictures were obtained from this book it needs no pointing out that it is truly a "key" to the game and success. You will see that as the pictures have been drawn from titles listed in the Key Book it follows the titles to the fifty pictures will be found in the Key Book! in the Key Book!

in the Key Book!

Hence our suggestion at the top, "Let's look in the book and see." Playing the Farm Implements Puzzle Game is simply a matter of studying the pictures and then determining which title of those you select from the Key Book is most fitting, appropriate or applicable. Only titles found in the Key Book can be used, because the judges will be guided in determining winners by the Key Book, just as participants will be guided in preparing sets of suggestions.

suggestions.

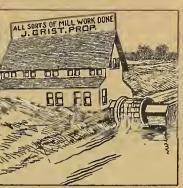
suggestions.

The coupon below explains a special offer by which participants can obtain a copy of the Key Book without cost to themselves. In other words, anyone sending in \$1.00 with the coupon below will receive not only a three-year subscription credit on FARM AND FIRESIDE, but will also be sent free and postnaid a also be sent free and postpaid a copy of the Key Book along with all other data and information. Although you are not required to

purchase or use the Key Book in order to play the Farm Implements Puzzle Game, its helpfulness, its vital importance, needs no pointing out. So if you want to share in the distribu tion of \$3,500 you should send in this couponatonce.

> awards, totaling \$3,500 and to be divided among

four hundred participants, follow: For the best set of title suggestions, \$1,000; for the next or second best set, \$500; for the third best set, \$250; for the fourth best set, \$125; for the fifth best set \$100; for the sixth best set, \$75; for the seventh best set, \$50; for the eighth best set, \$50; for the ninth best set, \$25; for the tenth best set, \$25; for the eleventh to fiftieth best sets, \$10 each; for the fifty-first to one hundred and fiftieth best sets, \$5 each; for the one hundred fifty-first to three hundredth best sets, \$2 each; for the three hundred and first to four hundredth best sets, \$1 each. Total four hundred awards, \$3,500.



What Farm Implement, Machine Part or Mechan-ical Term Does This Picture Represent?



to. 22
What Farm Implement, Machine Part or Mechan-ical Term Does This Picture Represent?







To Get the Official Key Book FREE Use This Coupon

Special Subscription—Free Key Book Offer Coupon 70-11-18

Farm Implements Game Editor, Farm and Fireside Springfield, Ohio

I desire to play your Farm Implements Puzzle Game. Enclosed herewith please find one dollar (\$1.00). Please extend my subscription to Farm and Fireside for three years from present expiration date. (If you are a new reader, subscription will be started with first issue sent you.) Also send me, free and postpaid, one copy of the OFFICIAL KEY BOOK containing a list of farm implements, parts and mechanical terms to be recognized and used in supplying titles to the fifty pictures, together with other data and information regarding the Game. I am also to receive pictures which have appeared in preceding issues.

Name	• • • • • • • • • •			• • • • • • • • • • • • • • • • • • • •
			•	
R. F. D				
P O	St	tate		



Around your car, in the garage — a can of

Old Dutch

comes in handy







Heights Water-Proof, Rust-Proof, 6 to 17 in. Rot-Proof. Warm in winter, cool in summer. Weight about the same as an all-leather work shoe. Will outwear several pairs of leather, rubber or wood soled shoes.

styles, gives prices and tells how to order. A postal brings it OVERLAND SHOE CO., Dept. 27-A, Racine, Wis.





TO-DAY HE MAKES \$50 WEEKLY

George Armstrong of Wisconsin has met with more than his share of hard luck. Four members of his family became seriously ill

at once and his earnings from his farm were not sufficient to defray the heavy medical expense.

He explained the situation to us and we offered him an opportunity to act as special representative of FARM AND FIRESIDE.

For seven weeks George has netted an average of \$50 weekly. Moreover, as 50% of the year's business is done in November, December and January, he will doubtless boost his earnings to \$75 during some of the weeks in that period.

There are openings in our organization just as good as the one we offered him. Thousands and thousands of subscriptions expire in the next three months.

months.
Our special agents' plan of renewing these subscriptions will make a delightful and profitable oc-

we furnish you with complete outfit of supplies free. This includes sample copies, fountain pen, rubber stamp with your name and address with pad, stationery, receipt books, credentials, etc. Just fill out the coupon to-day.



FARM AND FIRESIDE-AGENTS' DIVISION, Springfield, Ohio

DEAR SIRS: Please tell me how I can make \$150 or more monthly by representing FARM AND FIRESIDE through your special agents' plan.

St. or R. F. D.

Machinery

Neutral on Tractors

By Carlton Fisher

THE U.S. Department of Agriculture has published several bulletins dealing with tractors, but has carefully withheld endorsement of any particular type or make. Its neutral position is further defined by the following notice:

There have come to the attention of the United States Department of Agriculture items appearing in the press which are so framed as to give readers the impression that the Department in its publications has praised or recommended a farm tractor of a particular make.

As the Department has not done this and, in fact, systematically refrains from recommending any particular make of tractor or other machine, the public is warned to regard as false any statement asserting or implying such recommendation by the Department.

Up to the present time no official comparison of tractors has been made by Government or States. As in the case of automobiles, there is a perfectly honest difference of opinion as to their merits, and the experiences of actual users are the best sources of information in this matter. Readers of FARM AND FIRESIDE who operate tractors are accordingly invited to contribute their experiences and send pictures of tractors doing actual farm work.

Spreader Always Sheltered By H. E. Smith

RECENTLY noticed a reference in FARM AND FIRESIDE to the importance of a shed for manure spreaders. I have had my spreader three years and it has never been wet nor has it stood out in hot weather. As soon as I bought my spreader, which is of low-down type, I built a shed behind my stable which has a glass window behind each stall.

To clean out the manure I open the

To clean out the manure I open the windows and then fork the manure through them directly into the spreader. One forking is all that is needed. I have concrete floors in my stables with removable board floor on top of concrete where the horses stand. The concrete slopes back enough to drain all liquids from under the board floor. By using bedding freely I lose very little liquid manure, and the work is done quickly. It is very seldom that I can't get on some sod land in wet weather. By using bedding in the bottom of my spreader and placing lime on the bedding, I can sow the lime very nicely. To clean out the manure I open the

Water Systems Compared

WRITING under the title "Water Supply for the Country Home," M. K. Snyder, a Washington State sanitary engineer, gives the advantages and drawbacks of the various systems now in use. The three principal methods of in use. The three principal methods of securing running water on farms are (1) by means of a hill reservoir, (2) an elevated tank, and (3) a pressure tank in which water is forced out by the compressed air above it. These are sometimes called pneumatic tanks.

A hill reservoir has the advantages

A hill reservoir has the advantages of constant temperature, constant pressure, and low upkeep cost. It has the disadvantages of limited availability; way, and keep my presence of mind.

that is, the lay of the land does not often lend itself to this kind of system.

An elevated tank has the advantage of constant pressure, but the water becomes warm in summer and may freeze

A pressure tank has the advantages A pressure tank has the advantages of constant temperature and complete pressure control. It can be installed in the cellar or buried in the ground, thus giving no architectural problems. Its disadvantages are variable pressure and the fact that all the water in the tank is not available.

The devices now made for automatically starting a pump as soon as water

The devices now made for automatically starting a pump as soon as water is used from a pressure system overcome one of the objections.

From the standpoint of cost, the different systems are about the same except in specially favored localities. An elevated tank or a pressure system will seldom cost more than a long line of pipe to the top of a distant hill. The selection of a water system for any farm therefore depends on the sum total of the advantages compared with tal of the advantages compared with the disadvantages in that particular case. In principle they are about equal.

Boulder Tips Load Twice

By Geo. M. Wilder

IT TAKES some mighty hard knocks to teach some farmers anything, doesn't it? A neighbor of mine had a large boulder in the road leading from one of his hayfields. Last year a rainstorm was coming up and he was in a hurry to get a load of hay into the barn. The front wheels on one side ran up on this boulder and tipped the load over. The storm came up and soaked it, and it was several days before it could be stored for the winter.

I happened to be present and saw the

I happened to be present and saw the accident. Having had some experience in blasting with dynamite, I suggested to the man that he let me blast the boulder. Told him it could be done for less than a dollar, but he wasn't willing to spend the dollar.

So a few months ago, last year's experience was repeated in exactly the same way and at the same place. This time the neighbor didn't have to be coaxed to have the boulder broken up, and it cost him more than a dollar because dynamite has almost doubled in price during the past year.

Fails to Underlip Tree

By I. J. Muckenfuss

WHEN I was nineteen years old I started in the timber business, and I am still in that business, though I am nearly seventy years old. When I began I had many things to learn about cutting down big trees, and I learned some of this by dear experience.

I remember we were once cutting a very large tree, had it sawed on both sides. We did not have, as we should, the tree underlipped on the side in

the tree underlipped on the side in which direction we aimed the tree to fall. The tree was straight, and we had it sawed entirely off before it started to fall. There came a light gale of wind and the tree started in the opposite di-rection that we had intended it to fall.

The popping and cracking of limbs somewhat excited me, and I started to get away. I ran the same way the tree was falling, looking back very little, and lost the greatest saver of life—presence of mind. If I had thought, I could have stepped to one side or the other and been clear of danger. Instead I was trying to outrue the trace stead I was trying to outrun the tree, which was impossible.

The tree came to the ground with a crash, the trunk barely missing me. The ground was wet and the tree completely covered me with mud. If there had been many limbs, I would have been



Here is a small elevated tank which has been painted to match the buildings. A gauge registers the height of the water. Pump and engine are in the building below



Getting Out of Ditches

By B. D. Stockwell

A WISCONSIN automobile owner who has occasion to use his car the year round on strange roads, often none too good, asks what is the best method of getting a car out of a ditch or mudhole.

Greater care in driving and in turning around on a road will oftentimes prevent a trouble of this kind, and is the first thing to consider. I have found that when traveling a narrow road having a ditch on each side I can actually save time by going a mile to find a place to turn around rather than take the chance of getting into a ditch.

But the chief solution to the ditch problem when your car is mired is, first, to size up the condition of the ground and the position of the car before you do anything at random. If only one wheel is in the ditch and you cannot pull

out by going ahead, try to back out.

If that fails, try mud hooks if you carry any with you; otherwise tie cloths tightly around the tires and put down tightly around the tires and put down gunny sacks to prevent the wheels from slipping. If that is unsuccessful you still have a sure way to get out, though it is sometimes laborious. Jack up the wheel that is mired deepest and build a little road under it in the direction you want to go. Use gravel, stones, boards, or anything solid enough to bear the weight of the car. A small trowel carried in the tool box will be appreciated when doing such work. By building a little road in this manner a friend of mine got his car out of a bad ditch in half an hour unassisted. The same ditch had previousy delayed another machine over four hours, and in that case horses had to be finally used.

Shock Absorbers

By John Coleman

A MICHIGAN reader who has a five-A passenger touring car asks whether shock absorbers would be good things,

and whether they have any drawbacks.

A set of good shock absorbers cannot do any harm. The only danger in using shock absorbers is in getting cheap ones which may break. Those which have a device, pneumatic or otherwise, for checking the rebound are better than simple compression springs. simple compression springs.

They make the car somewhat easier riding, though much of the added comfort is doubtless mental, simply from the knowledge that there are shock absorbers on the car. But if you get shock absorbers, get good ones.

Low Gasoline Mileage

A WOMAN subscriber whose address is incomplete writes that her car, which is supposed to give fourteen miles on a gallon of gasoline, runs only nine

miles, on good roads.

This difficulty may be due to a nu ber of causes. A new car seldom gives as low a gasoline consumption as it will after a thousand miles of running to

Or the spark may not be advanced as far as possible when driving, and the greatest power is not secured from the gasoline. Consequently more is required. Or possibly a brake drum may be dragging or the lubrication is insuf-ficient. Or possibly the exhaust valves may be improperly timed or need grind-

ing.
Still another cause may be the use of poor lubricating oil which allows some of the gas in the cylinders to escape during compression. The most satisfactory method of correcting a trouble of this kind is to have an automobile ex-pert who is familiar with that particular make of machine give it a run of several miles. The manner in which the machine responds to the throttle will be the best index as to the cause of the trouble. With practice one learns to economize in gasoline by running the car uniformly, seldom using the brake, and by using a lean mixture.

However, as some cars use more gasoline than others of the same size and weight, the matter of gasoline mileage is worth looking into before purchasing an automobile.

Car in Hay Barn

By Frank Orr

"IS IT safe," writes an Ohio reader, "to keep an automobile in the barn which contains hay and straw and where we never go with a lantern? Of course I should place my gasoline tank some distance from the building. I do not care to build a garage until spring, but should like to have use this winter of the machine I am about to buy."

While a barn filled with hay is not a very good place to keep an automobile, there is no serious danger if a few sim-

there is no serious danger if a few simple precautions are observed. Keep a large pan under the machine to catch any oil that may drip. Perhaps several pans may be needed. While the drip-ping is usually slight, the pans will keep the oil from soaking into the barn

Keep a half-inch of sand in the bottom of the pans as an extra precaution. Also allow no oily cloths to accumulate in the barn. The most common dangers will be from the sources just mentioned and from back-firing of the engine in starting. But back-firing is not likely to occur if the machine is in good condition and filtered gasoline is used. The soft light to was around a machine safest light to use around a machine kept in a barn is an electric flash light, which may be had for from \$1 to \$2, including the battery. Those using standard-size dry cells are most economical.

Keep the barn floor around the car free from chaff and hay and the danger from fire will be very slight, especially in winter. But build the garage as soon as you can.

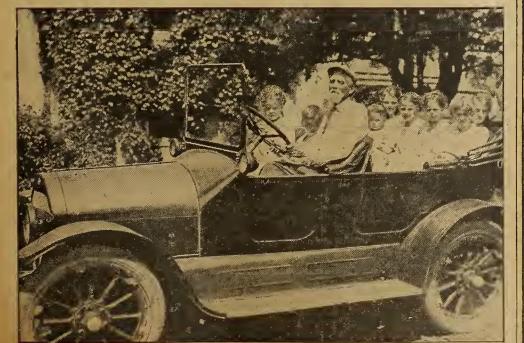
From Ox Team to Motor Car

RIVING a high-powered motor car DRIVING a high-powered motor car over the same roads he traveled more than sixty years ago is the achievement of J. M. Kimball, a pioneer settler of eastern Kansas. Mr. Kimball is now eighty years, and the picture shows him entertaining his grandchildren.

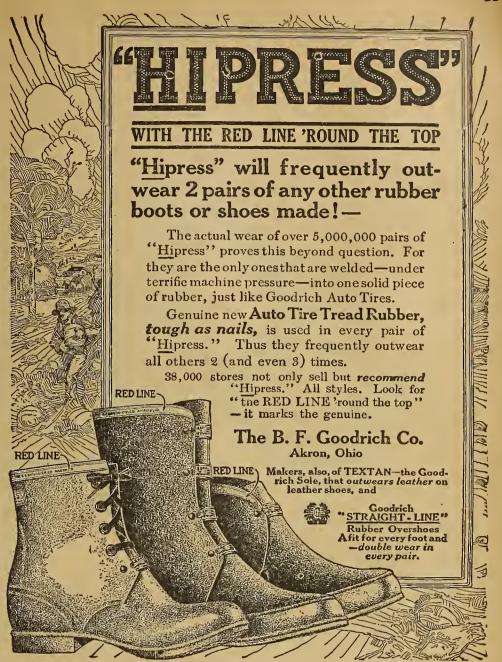
He not only drives the car but keeps it in his own garage, and takes care of it himself. When Mr. Kimball came to Kansas from New Hampshire along in the fifties, rail transportation ceased at

the fifties, rail transportation ceased at St. Louis, and he finished his journey by boat to Kansas City and from there he drove across the prairie with ox team and wagon.

ox wagon and no roads A new car seldom gives at all to a modern automobile and asphalt paving is no small step, but one to which a pioneer of the early days is well



J. M. Kimball drove into Kansas sixty years ago behind a yoke of plodding oxen, he little dreamed that he would entertain his grandchildren in this manner





We teach you to handie any auto proposition. You graduate in from eight to tweive weeks. Our equipment is complete. Students actually build cars from start to finish, getting factory training in assembling, block-testing, road testing, everything. Special complete course in Oxy-Acetylene brazing, welding and cutting, separate from regular course. All leading, types of starting, lighting and ignition systems in operation. Learn to time motors, adjust carburetors, magnetos, valves and bearings quickly and accurately. Six-cylinder Lozier and eight-cylinder King are used for road instruction. We have a new Chaimers "6-30" chassis with 3400-r. p. m. motor, the latest thing out, also a 1917 Detroiter-6 and an Overland. Just added Delco System as used in tulck, Hudson and Packard Twin "6." We have also installed a 1917 Willys-Knight complete chassis in hop for students to work on.

Detroit Is the Place to Learn—Start Any Time

There are 44 auto factories in Detroit and 140 accessory and parts factories. Our students have the privilege of going thru any or all of them. We now operate Westinghouse Auto-Lite and Bijur Service Stations. After careful consideration the Westinghouse Electrical & Mfg. Co., the Auto-Lite Co., and the Bijur Co. decided that our school was the best place in Detroit to handle their service stations. This has added thousands of dollars' worth of equipment and makes our electrical department unequaled. These are special advantages offered by no other school. Students get actual experience and training in handling all kinds of electrical auto equipment and taking care of trouble. We have just installed a Sprague Electric Dynamometer for block-testing purposes for students' use. The Michigan State Auto School students. School Come to Detroit is the automobile center. You get practical instruction. Come to our school and learn the auto business right. School open all the year. Enter classes any time, any day. Three classes daily: morning, afternoon, evening. You can work in the factory in the daytime and take course of trouble. We have just installed a Sprague Electric Dynamometer for block-testing purposes for students' use. There is a great demand for Michigan State Auto School students. Garages throughout the country write us for men. Auto factories write and phone for men constantly. We have a greater demand for our graduates than we can meet. Factories and Garages are paying big salaries to men who kno know how to handle electrical equipment quickly and properly. Detroit is the automobile center. You get practical instruction. Come to our school and learn the auto business right. School open all the year. Enter classes daily: morning, afternoon, evening. You can work in the factory in the daytime and take course of the factory in the daytime and take course of the factories need demand for our graduates than we can meet. Factories and Garages are paying big salaries to men who know how to handle electrical equi

Follow the Crowd to the Michigan State Auto School. Come to Detroit.



This Is One of the 1916 Classes.

Factory Co-Operation

We have completed arrangements with the Auto factories to put them in touch with men who intend going into business for themselves. Think of getting inside information. The factories are looking for trained men to represent them. Men who know the auto business from A to Z are in biggest demand. Come here and start right—get the information first-handed and don't wait. Our students get the best and latest things to work on. Our electrical department is thorough and complete. It is in charge of one of the most competent electrical instructors.

Additional Building and Equipment

33,000 sq. ft. of additional floor space in our new building, thousands of dollars' worth of new equipment, plenty of room for students to work. This comes with our new building at 687-89-91 Woodward Ave. Our school has grown by leaps and bounds, students come from all over the world. Men have left after graduating and started in business for themselves; others have accepted good jobs both in Detroit and over the country. Their work has proven that we train them rightly. We are constantly adding new equipment.

Money Back Guarantee

We guarantee to qualify you in a short time for a position as chauffour, repair man, salesman, tester, demonstrator, garage man or automobile dealer, paying from \$75 to \$300 monthly, or refund your money. We have constantly more requests for Michigan State Auto School Graduates than we can cupply.

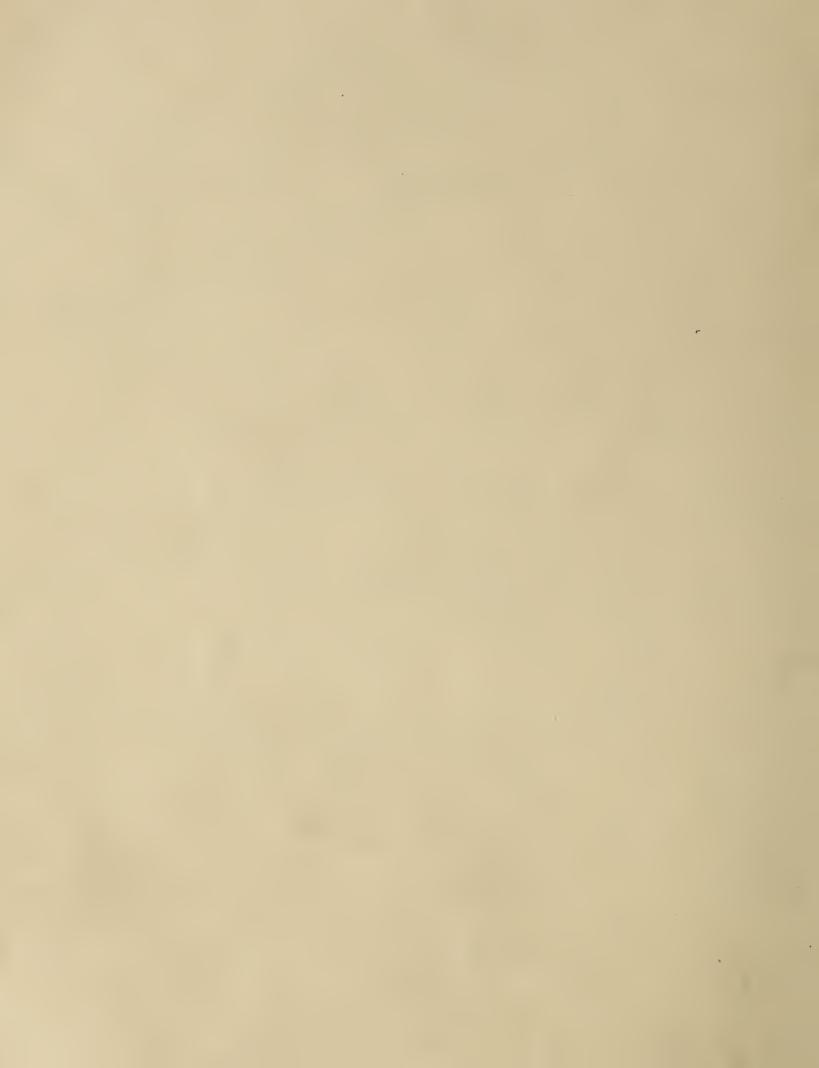
Act Quickly-Now-Don't Wait

Get full particulars: "Auto School News" and New Catalog. They are both absolutely free. Or better still, jump on a train, as bundreds bave done, and come to Detroit, be "Heart of the Automobile Industry," and learn right. Remember you can enter classes any time, any day. The price of course is based on giving full value. Therefore we cannot give another course free. Graduates in the complete auto course are competent to handle farm tractors. Act quickly—now. We have no branches. Write or come direct to this school.

or come direct to this school.

MICHIGAN STATE AUTO SCHOOL
The Old Reliable School
A. G. ZELLER, President
1231 Auto Bidg., 687-89-91 Woodward Ave., 11-19 Seldon Ave.
Detroit, Mich., U. S. A.





RADE MARK RES

So much more for the money

This c.r. Ils itself to anyone who starts out to get the met for his money in a proof, bit, roomy, five pasenger car.

Comparison proves a plain comparison proves a plain comparison proves to know.

You don't have to be an expert or have any special knowledge to determine the hig extra value you get in this or.

Its advantages stand out so boldly that they cannot be overlooked in a comparison with any car selling for \$795—or for a great deal more.

You get more power—35horsepower motor—more than 250,000 in use.

You get more room—112-inch wheelbase.

You get greater comfort long, 48-inch cantilever rear springs and 4-inch tires.

You get greater convenience —electrical control but ons on steering column.

You get bigger, safer brokes—service, 133 (x2)/1; emergency, 13 x 2)/1.

You get better cooling—you never heard of an Overland overheating.

This is the bar car we have to sell until a than \$1000.

In fact it's a car which the our enormous production for \$795.

If you want the money in a be roomy, five of long prove superiority—he argument poe can determine yourself.

And back of the c r is the t and m t successful till concern in the wild that produces c rs of the size and cl.

A b k of it also are the let established, most ful utomobile dealers to be found.

Y e 't be t auch n coml the er the t everyc e kn ws i 100' o right
mech ii lly a cur that is
l ed so low that extra
v ue s'icks out all over
i' hig strong thoroughly blished concern b ck
of the er and a successful
errorusing local dealer to
do usin with.

See the Overland doler in your nevert town he will glodly show you the even demonstrate it—give you a prompt delivery—and render prompt, efficient service as long syou own it.

Now is the time to buy—when you've time to enjoy your ear and lots of good driving weather.

And when things freeze up, put on your curtains and go anywhere comfortably in any kind of we ther all winter long.

Same model, six cylinder—35-40 horsepower—116 meh wheelbase, \$925.

Catalog on Request Plan 806

The Willys-Overland Co y, Toledo, Ohio

"Made in U.S.L"





'Reo" Metal Shingles cost less, yet outlast three ordinary roofs. Need no painting or repairs. Rot – fire – weather – rust-proof. Insurance cost is less – guaranteed against lightning. Spanish Metal Tile

Edwards Exclusive Tightcote Process

Interlocking Device prevents warping, bnckling or breaking. Protects nail holes-nails are driven through under layer; not exposed to weather. No special tools required. Easy Edwards Potent ("Grib-Lock")



Edwards Products Stand the Galvanizing Test No other galvanizing can compare with it. Bending, hammering or lightning won't cause it to flake, peel or crack.

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The Edwards Mfg. Co. 1108-1158 Pike St., Cincinnati, O. Please send FREE Samples, Freight Paid prices and World's Greatest Roofing Book No. 1158. Name.....

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FERRETS FOR SALE—Either color, any size, singles, pairs or dozen lots. Catalogue free. C. H. KEEFER & CO., GREENWICH, O.

We pay top prices for Skunk, Mink, Muskrat, and all raw Furs. Price list free. M. J. JEWETT & SONS, REDWOOD, N. Y. - DEPT, 7.

Free Baits For Trappers

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WITTE ENGINE WORKS
2067 Oakland Ave., Kansas City, Mo
2067 Empire Building,
Pittsburgh, Pa.



Where Hens Do Well

By Vincent Lee

TATELY I have been a number of L times at a farm where a young man and his wife are doing well with poultry in connection with their butter-making business. There are some 30 head of cattle on the place and dairying is supposed to be the leading industry; but it looks as if, first you know, the poultry end of it will get big enough to claim first place.

They now have some 250 hens, with as many more last spring's pullets about ready to lay. The last day I was there the young man told me they were getting around 10 dozen eggs a day. The young man himself takes care of the birds, and he is all upset if they do not get their rations at just such a time and in the way he has marked out. When the other work on the place presses, however, the young wife steps out and feeds and waters them, so far as I can see, just as well as her hus-band, from whom she has received her

training in the poultry business. There are two poultry houses on this farm, each 100 feet in length. One has a cement floor, and the other earth with gravel top. It is only a few years ago that the only house on the place was a little one, 20 feet long, and the stock was the common everyday farm brook. was the common, everyday farm breed; but now there are only well-bred White Leghorns to be seen there. The market for this farm is New York, and the eggs are shipped while strictly fresh. Having had some experience in storekeeping before coming on the farm, the young man understands the necessity of getting eggs to market just as soon and in just as attractive condition as possible after they are laid. The small eggs, what there are of them, are sold to a local dealer.

The opportunities for farm poultry-

keeping most all over this country are good. It would bring in a good deal of ready money and at the same time furnish fine fertilizer for the place.

ARE you sure that the commission concern to whom your eggs and poultry and other produce are going is financially reliable? If in doubt, drop a card and FARM AND FIRESIDE will give you the facts.

Keeping Peace Among Males By J. L. Woodbury

TO TAKE care of the cockerels, especially the choice birds selected for sale or breeding, is usually one of the most perplexing problems confronting the breeder in the fall and early winter. After being separated from the pullets, they will as a rule run harmoniously together for some time. But some day, in a playful "brush," two may get their tempers started. Then a real fight ensues, which, if not interrupted, most likely results in spoiling one or both as a show prespect or as a candidate for a show prospect or as a candidate for a fancy price.

Returning the birds to a flock after they have been removed for a few days, as is often necessary in show season when short of room, will always start trouble. One bird will in nearly all

cases be found to be the prime disturber. When I ascertain, by watching, this particular bird I step into the pen and check his savage assaults by planting one, two, or even more, kicks against his body. Then I go away, but return in a few minutes. If I find him or any of the others scrapping, the boot treat-ment is repeated. Sometimes I grab up the more quarrelsome and whack them with my hand and shake them quite roughly until they appear cowed. They soon get so that if I merely throw up my hand and yell, the cockerels that make trouble will quickly make for the farthest corner of the pen.

Mind, I always avoid brutality, carefully keeping my temper, and inflicting only reasonable punishment, comparable to such as is often necessary in the case of a refractory ox or horse. The method has worked wonders with me.

Green Foods and Substitutes

By Anna Wade Galligher

AGOOD supply of green room not only increases the egg yield but reduces the cost of production. Every poultry raiser should have an oats sprouter. GOOD supply of green food not only Sprouted oats has proved to be the best

green food that I have ever used.

A good substitute is green rye cut when frozen and piled on the ground. Then cover with dry leaves or dry straw several inches deep. Weight down the dry covering with boards or brush. All kinds of poultry like green rye thus preserved. It keeps until late in winter.

Corn silage is a fair substitute for green food. I also use dried lawn clip-

Finishing for Fancy Price

By A. L. Roat

O GET the most dollars out of my market poultry I aim to finish them to the best possible condition. To do this I depend on crate fattening and select the cockerels that are ready for the grade of birds I wish to market, whether broilers, springers, or roasters, put them in the fattening pen in a comfortable place off the ground. I begin feeding with a moderate ration and increase the feed so that in three days they are eating all they will consume. I never leave any feed in the hopper after they stop eating. I supply the birds with milk to drink, together with a mixture of one part coarse flour, two parts corn meal, mixed to a moist consistency with milk, morning and noon. Also all the corn and mixed grain they will eat at night. Charcoal, grit, and oyster shell are before them all the time. After the birds stop eating, curtains

are drawn over the crate, then the birds sit quiet until next feeding time. I always dust each bird with insect pow-der before placing them in the feeding crate, and no bird is fed if not in tiptop condition.

Practically the same treatment is given to the old hens that are to be turned off to make room for young stock. But with hens less care is necesstock. But with hens less care is necessary in crate feeding. About all that is required is to give them plenty of corn meal made into a moist mash mixed with milk, and allow them plenty of milk to drink, and water as well. These old hens marketed at the time of the Hebrew holidays bring me from 22 to 25 cents a pound, but they must be fat and can't be too fat, and must be sold alive. can't be too fat, and must be sold alive. September 20th to 23d inclusive, this year, was a big market for the old hens with me. For years I have sold fat hens in September and October for big prices for the Hebrew trade.

If poultrymen will write to the wholesalers in large cities regarding fat hens and get the dates when there is the best demand for the Hebrew holiday trade, they can realize some good money from this source.

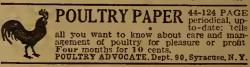
Two weeks feeding in these pens gave Mr. Roat an added profit of from 15 to

30 cents a bird



KEROSENE ENGINES

Durable, Powerful, Reliable, Massive. Built to last; to do hard, heavy work. Uses Cheapest Fnel. Poll ½ to ½ horse-power more than rated. 3 Months Trial. Easy Terms. Sizes 1½ to 22 H-P. Easy to start. No Cranking. No batteries. 10 Year Guarantee. Most practical engine ever bnilt. Engine book free. A Postal brings it. THE OTTAWA MANUFACTURING CO., 1151 King Street, OTTAWA, KANSAS.



SQUAB BOOK FREE industry, PLYMOUTH ROCK SOUAB CO., 503 HOW-ARD ST., MELROSE HIGHLANDS, MASSACHUSETTS







Egg-o-hatch applied to eggs during incubation strengthens the chick and weakens the shell. It supplies free oxygen, absorbs carbon dioxide and makes brittle and porous the anima! matter of the shell. The blegges thing ever offered to poultrymen. 50 test hatches show average of 96 per cent for Figg-o-hatch eggs and 81 per cent for eggs not treated, right in same meshale. ever offered to poultrymen. 50 test hatches show average of 96 per cent for Egg-o-hatch eggs and 81 per cent for eggs not treated, right in same machine. Send 10 cents for sample, for 50 to 100 eggs. Full size package, for 600 eggs, 50 cents postpaid. Booklet free.

GEO. H. LEE CO., 212 Lee Bldg., Omaha, Nob.



185 52 INCH CANOPY

LUN

Less to Run 41 INCH You can pay more—but can't get more. Capacity 50 to 1500 chicks. Self-feeding and

regulating. Gas and spark tight. Portable and everlast-Gas and spark ing. Coalonly once in 24 hours. Costs but 5c a day to run.

Don't take an imitation.
This is the only BIG value.
Write for circular.
CORRECT HATCHER CO.
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Light Weight Cushman Engines

4 H. P. Weighs Only 190 lbs.

Monnted on light truck, it may be pulled around by hand. Besides doing all regnlar farm work, it is the original and successful Binder engine.

for All Farm Wor 4 to 20 H.P.

Our Fortieth Year

[CONTINUED FROM PAGE 9]

weed growth in grains, grasses, cultivated crops, and fallow land, and as an improved means of controlling pests that can be destroyed by plowing under the adult insects and their eggs.

"Making Insect Models," by Day Allen Willey, tells how a woman entomologist does helpful work in making large models of cron-damaging insects

large models of crop-damaging insects. These models are several hundred times

These models are several hundred times the size of the insect.

"Growing Rice in California," by Arthur L. Dahl. The remarkable development of the rice industry in California has naturally raised the question:

"What are the elements necessary for rice culture?" Mr. Dahl answers this question very well.

"Getting Settlers," by S. R. Winters.
To raise useful men and women as well

To raise useful men and women as well as good vegetables is the object of a as good vegetables is the object of a colonization plan operated in eastern North Garolina. The plan was started ten years ago by a man who inherited 1,200 acres of truck land from his father. Now the colonization plan is operated on several thousand acres.

"Handling Boy Help," by R. E. Jones. This article gives Mr. Jones's experience, and tells how he met the problem of boy help.

of boy help.
"Concrete Culverts," by Alfred R.,
Williams. Hind wheels in a ditch! How
familiar are these words to many a
farmer! Perhaps it is at threshing farmer! Perhaps it is at threshing time. The threshing outfit is on the way to the farm, and the extra men are hired and waiting for the work to begin. The thresher leaves the public road and is in the lane on the way to the grain stack. Crash! An old wooden culvert over a ditch gives way. You

know the rest.

"Making a Small Farm Pay," by Fred
L. Holmes. Individual initiative is the
mainspring in making a small farm pay. This is the opinion of F. F. Showers of Wisconsin, from an actual trial on 40 acres. The story instilled such inspira-tion that it is told in a little booklet sent out to their customers by more than one hundred Wisconsin banks. For twentythree years Mr. Showers was a school teacher, then he bought a farm and went to work. He has made his little farm a big success.

"The Bedroom," by Ruth M. Boyle. Occasionally the visitor on the farm is

ushered into an airy bedroom where the harmonious color scheme, the dainty curtains, the simple, well-made furniture, and the spotless linen all suggest rest and refreshment. But more frequently both family and guest sleep in stuffy, unattractive quarters where lit-tle or no thought has been given to wall

tle or no thought has been given to wall paper or furnishings.

"Making the Most Out of Alfalfa," by E. R. Adams. Many growers of alfalfa used to market their entire output in the form of hay. Rain changed this plan. Feeding the poorer grades of alfalfa hay and the threshed alfalfa hay to live stock has increased their profits.

"Finishing Western Lambs," by Andrew M. Paterson. Three hundred and ten lambs were bought on the Denver

drew M. Paterson. Three hundred and ten lambs were bought on the Denver market. They were shipped to Manhattan, Kansas, and fed out. The profits from the lambs, when sold on the Kansas City market, varied from \$1.60 to \$1.79 a head. Other excellent sheep articles are "Handling Sheep on Farms," by Joseph A. Rickart, and "Sheep for Renovation," by H. H. Sheperd.

"Raising Hogs on Irrigated Land," by W. C. McCormick. It has been proved beyond a doubt that pork can be produced at a profit outside the corn belt. While corn constitutes the best ration

While corn constitutes the best ration in lattening nogs, there are other grains successfully raised in irrigated sections of the United States that produce results nearly equal to corn.

"Controlling Foul Brood Among Bees," by Oscar Kazmeier. Foul brood is doing its greatest damage with smallfarm beekeepers. Once the disease gets a hold, it spreads so rapidly that a small apiary may be wiped out. Mr. Kaz-

apiary may be wiped out. Mr. Kazmeier tells how to save your bees.

Other big features are: "Testing Dairy Breeds," "The Fertilizer Industry," "Farming with Twenty Inches of Rain," "Hog-Cholera Serum," "Blackleg Serum," "Improvement in Farm Machinery," "Dairy Cows on \$500-an-Acre Land," "Running Water for \$50," "Dusting Fruit Trees," "The Motor Car," "The Gasoline Engine," "Farming with Tractors," "Home Improvements," and "Lighting the Farm."

This is my forecast of FARM AND FIRESIDE for the year 1917. Does it interest you, and do you want it? I hope you will say—600,000 strong—YES.

PLAN as if you expected to live a thousand years. If there is anything that will knock the props out from under the best living, it is to think you are at the end of your rope—nothing left, except a few days more of waiting and watching for trouble ing for trouble.

Same HUDSON SUPER-SIX Again Breaks Ocean to Ocean Record

On Return Trip Across America It Beats Best Previous Time and Establishes World's Endurance Record

The same Hudson Super-Six Touring Car which ran from San Francisco to New York in 5 days, 3 hours and 31 minutes, started back from New York on its arrival there and again made the transcontinental trip in shorter time than any other car ever made it.

Last spring the wonder record for the one-way trip made by a famous eight was 21/3 days longer than the time required by the Super-Six.

No other automobile ever made the round trip against time. Yet in both the going and return trips the Hudson Super-Six lowered the best previous one-way record.

In a little more than ten days the Super-Six covered 6,952 miles.

Counting all stops, and slowing down to the speed restrictions of 350 cities, towns and villages each way, the average time from San Francisco to New York and back to San Francisco was almost 700 miles a day.

In the last leg of the return trip, between Elko, Nevada, and San Francisco, heavy mountain rains were encountered. In the going trip that distance was covered in 20½ hours. On account of the rain and mud, 35 hours were required on the return. Under similar road conditions as were met in the going trip the return would have been under 5 days.

Hudson Holds Every Worth-While Record

There are no important world's records which refer to a stock car that the Hudson Super-Six hasn't won. The best former records are too easy for the Super-Six. The events are too easily won. For instance, in the 24-hour record, 1819 miles, it exceeded the best former record by 52%.

And the Super-Six made the best time in the world's greatest hill-climb up Pike's Peak. The best time for 100 miles. The greatest distance covered in one hour and the fastest time for a stock chassis at the rate of 1021/2 miles an hour.

Such Endurance Is Convincing

Phaeton, 7-passenger . . \$1475 Roadster, 2-passenger . . 1475 Cabriolet, 3-passenger . . 1775

Here we prove again that the Hudson Super- ber 1, except for some minor details.

Six has more endurance than we have ever claimed for it:

What can be more convincing than that round trip across the continent made with a Hudson Super-Six light weight 7-passenger phaeton? Previous records were made with roadsters and stripped cars, but the Hudson at all times carried three, and sometimes four, passengers, and with its baggage weighed in excess of 5,000

No Engineer Hopes to Excel It

Remember that the Super-Six is a Hudson invention controlled by Hudson patents.

A hundred cars have motors of like cylinder capacity. Many cars have more cylinders. But in the Super-Six vibration has been reduced to almost nothing. That adds 80% to efficiency.

The Super-Six is not one of the passing sensations. Ours is not one of those claims to motor supremacy which yields in a year or two to another. Mark what these records mean. There is plenty of evidence now to convince you that it cannot be superseded.

Save \$175 Now

For many reasons, now is the time to get a Hudson Super-Six.

In the first place you can get delivery now. Last summer thousands had to wait, and thousands must wait next spring.

Then by buying now you can save \$175. The price will be advanced December 1. The models will not be changed. You get the same Super-Six motor, the same wonderful chassis, and the same beautiful body. Your car you get now will be identical with those we shall sell after Decem-

Town Car Landaulet . . . 2850 Limousine Landaulet . . 2850

HUDSON MOTOR CAR COMPANY, DETROIT, MICHIGAN

(Prices f. o. b. Detroit)

. . . . \$2000

Touring Sedan . Limousine . . .







The Farm Liniment

Winter is the critical period for horses, cattle, sheep, hogs, chickens, in fact all the living assets of the farm.

The vitality required to resist cold and exposure draws on their reserve strength and long inactivity increases the danger from disease.

Because thousands of farmers have found many uses for Sloan's Liniment when emergency treatment was imperative, it has been aptly called the farmer's "veterinary" and has served him in this capacity for more than 30 years.

Your dealer has it in 25c. 50c. and \$1.00 bottles. There is six times the quantity of the 25c. size in the dol-lar bottle. Full directions for its use with LINIMENT every package.





"FARMER'S FAVORITE"

LEWIS MFG. CO. 72-86 Owego St. Cortland, N. Y.

Big Profits in Butter-making

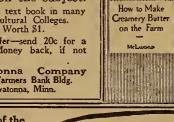
-if you can make high-grade butter. The new book "How to Make Creamery Butter on the Farm" tells you how, explains clearly every process of scientific butter-making.

Most practical and un-

derstandableworkpublished on the subject. Used as a text book in many Agricultural Colleges. Worth \$1.

Special Offer—send 20c for a copy. Money back, if not satisfied.

Minnetonna Company 1905 Farmers Bank Bldg. Owatonna, Minn.







Raise Your Calves on **Blatchford's Calf Meal** and Sell the Milk

More calves have been raised on Blatchford's Calf Meal than on all other milk substitutes combined.

100 lbs. makes 100 gallons of milk substitute, costing only one-third as much as milk.
Prevents scouring and insures the early
maturity of sleek, handsome calves.
It is steam-cooked and no trouble to pre-

Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or Blatchford Calf Meal Factory, Dept. 3 Waukegan, Ill.



Dairying

Valuable Cow from \$10 Calf

By E. A. Lagergren

A YEAR ago last September I paid a neighbor \$10 for a heifer calf only two weeks old. We bought a quart of new milk and a gallon of skim milk a day, costing us about \$5 a month. Soon she was able to eat hay, and we tied her in our little orchard where we had oats and vetch planted. Here she lived fat until time to plow.

In April we put her to pasture at \$1 a month, and in October we brought her home with calf. She is as nice a looking cow as one would want, and we value her at \$100. In fact, we could not buy one that suited us as well for that amount.

We live in town and have a large family, and have tried several times to get a good cow that would pay for herself, but people will not sell a good cow, only the scrubs. This cow is now six-teen months old, and has cost us less than \$40, and this has come so gradually that we have not missed it.

Leaky-Teat Problem

By Dr. A. S. Alexander

PLEASE tell me if anything can be done for a cow that has leaky teats. The milk runs out almost any time during the day."

ing the day."

This question which a North Carolina reader brings up may be solved in several ways. First, soak the cow's teats twice daily in a saturated solution of alum in cold water. If this does not do the work, paint the ends of the teats with flexible collodion, coat after coat after each milking.

If that plan does not stop the leaking, tie a wide tape around the teat just above its tip, but be careful not to shut off the circulation of blood, as that would cause sloughing and sores. A

would cause sloughing and sores. A wide weak rubber band may be used in the same way. Surgeon's tape is sometimes used, but that interferes with milking and requires the use of a milking tube which must be boiled before each milking to sterilize it. Do not use surgeon's tape and the milking tube unless all other methods fail.

Another Premature Milker

"SEEING your question to dairymen," writes a New York reader, "as to a heifer being brought to her milk before she is bred, I will say that she will freshen as usual. We raised a Jersey heifer, and when she was a little over a year old we turned some little calves into the same pasture with her. The calves nursed the heifer and brought her to her milk.

"We then sold the little calves and milked the heifer. She gave a tumblerful twice a day. Neighbors said she never would be worth a dollar as a dairy cow. But when two years old she had her first calf, and there never was a better cow in our dairy than she was.

a better cow in our dairy than she was. "Our little daughter would milk her out in the open pasture anywhere, she was so gentle."

Contagious Abortion

CONTAGIOUS abortion is responsible for a loss of \$20,000,000 annually to cattlemen of the country. This includes dead calves and lowered milk

production. The situation with regard to the disease is summed up as follows by the U.S. Department of Agriculture: Contagious abortion is second in im-

portance only to tuberculosis.

It is rapidly spreading to all parts of the country.

Congress appropriated at its last session \$50,000 to study the scourge fully and develop methods for its control.

Contagious abortion is a germ disease which prevents the bearing of live calves and frequently causes cows to become sterile and remain dry.

The germ is carried from animal to animal and from herd to herd by means of infected breeding stock, by feed, water, or discharges of aborting animals.

The most practical means of control-ling the disease known at the present time are disinfection of barns and premises and antiseptic treatment of diseased

No satisfactory internal medicines and no serum treatments for it have yet been discovered.

The U.S. Department of Agriculture is now preparing a bulletin which will give full particulars as to the best means of preventing and combating the

Dairy-Cow Appraisals

PERSONS who buy or sell dairy cattle will be interested in the conclusions of J. C. McDowell, farm management specialist in the U.S. Department of Agriculture. Mr. McDowell has made a canvass among breeders to find out at what age certain classes of dairy stock reach their greatest value, and also how these prices compare in different parts of the country.

Holstein cows, he country.

Holstein cows, he concludes, reach their greatest money value at six years of age, but the values do not vary much between the ages of four and eight years. After a cow is eight years old her value decreases rapidly. For inyears. After a cow is eight years old her value decreases rapidly. For instance, a grade Holstein calf worth \$10 at birth is worth \$61 as a two-year-old, \$91 at four years, \$102 at six years, \$93 at eight years, \$60 at twelve years, and \$44 at fourteen years.

A pure-bred Holstein worth \$62 at birth is worth \$200 at three years of

birth is worth \$200 at three years of age, \$256 at six years, and \$82 at fourteen years. Holstein cows in their prime have about the same value all over the country, but Holstein calves or old cows are cheaper in the East than in the Central West. This difference is ex-plained by the greater cost of feed in

Highly bred Guernseys reach their greatest value in their fifth year, but grade Guernseys and all Jerseys are most valuable when six years old. Ayrshire cows in their prime are worth from \$5 to \$16 more per head in Eastern States than in the Central West, but calves and old cows are worth less. Pure-bred dairy calves are worth from four to six times as much as grade calves, and even as old cows pure-breds are worth 50 per cent more than grades

are worth 50 per cent more than grades. This is due to the possibility that the old cows may still produce valuable

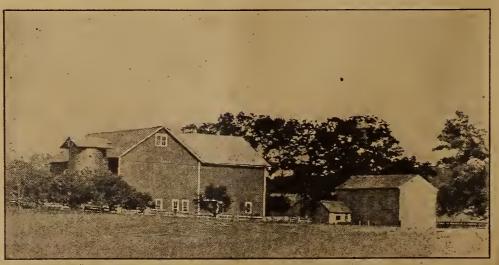
The Old and the New

By H. W. Weisgerber

BUILDINGS are like an open book, read by all who can see. And nothing tells the prosperity of a farmer better than good substantial buildings.

True, they may not be entirely paid for, but neither are our public improve-

A 20x40-foot barn, too often built of swered the purpose in days when the cultivated acreage was small. But now, cultivated acreage was small. But now, with many acres under the plow and with large herds of dairy cows, a big barn with its attached silo is necessary for the well-conducted farm. In the picture, taken in Ohio, the old barn, rough and unattractive, is in striking contrast with the new one, neatly painted and nearly surrounded by trees.



That times have changed is evident from the appearance of these two barns. Big operations and ideas require buildings in proportion to them



A Jump in Her Record

Most every herd has one or more cows that seem sluggish and low in yield without any apparent reason. In many cases this may be due to some vital organ becoming overworked. Proper treatment is needed to build up the system and fortify the cow against serious disease.

disease.

If you have such a cow, buy a package of Kow-Kure from your feed dealer or druggist and use according to directions. You'll be surprised at the difference it makes in her general health and milk yield. Kow-Kure is especially recommended as a preventive and cure for Abortion, Barrenness, Milk Fever, Securing Jost Appetite Bunches and Re-Scouring, Lost Appetite, Bunches and Retained Afterbirth.

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Live Stock

Breeding Heifers Too Young By R. B. Rushing

SCARCELY a farm paper that has a live-stock department but what has Dlive-stock department but what has more or less to say about weeding or culling out poor cows, hence the question is, What makes so many poor cows at the present time? The present high price and the scarcity of good dairy cows are a great temptation for the cattleman who has a large herd of yielding heifers of the milking breed to breed them at the earliest possible period and get into milk in order to get high prices for them for dairy nurnoses

period and get into milk in order to get high prices for them for dairy purposes.

This, however, is a great mistake, as many a young cow has been weeded out of the herd as a cull and found her way to the butcher's block, when if she had been kept a few months longer before breeding she would have made a profitable milker for the dairy herd. I have seen year-old calves bred when they were no more fit to become mothers than a six-months-old calf. This forced them to become mothers before they were two years old, placing them in a weak and years old, placing them in a weak and nervous condition with not enough vitality to support the calf. They were expected to give as much milk and the milk as rich in butterfat and milk solids as the heifer that brought her first calf

when a three-year-old. And because they often do not, they are fattened and sold to the butcher for beef. A year-old calf is growing so fast that it takes about all the feed she can consume to supply her with the proper elements of bone and muscle making. If she is bred at this stage, her work of bone, muscle, and hair making is doubly increased, which is too much for her constitution. And as nature forces her to divide a certain portion of the food consumed by her with her calf (or rather the substance of the food), her own body does not receive sufficient nourishment to keep it in a growing and healthy condition, hence some part of hear body must core to grow and after her body must cease to grow, and after her calf has come she is much smaller than she would have been had she not been bred.

The calves of such heifers are not generally of much account—they are small, weakly, peevish things which are often not worth the trouble of raising

I always try to breed my heifers at the age of two years, never before that age, and after I have bred them I am particular about their welfare.

While pregnant, a little dry feed mixed along with what they get on the

pasture during the summer season, with plenty of pure fresh water, goes a long ways toward bringing the cow out in good shape after her calf has come, and insures a profitable dairy cow and a robust, healthy, and valuable calf.

Shipping Stock

that co-operative live-stock shipping associations will do nearly \$18.000,000 worth of business this year. This cooperative shipping saves farmers from \$20 to \$50 a car on the stock shipped, and the price received is much nearer what the animal is really worth.

The Horse Stalls

By E. L. Vincent

THERE is not much fun in having a good horse laid up, not knowing what the outcome may be. One of the mares got the habit of kicking in the stall. So far as we know there was no excuse for it. Be what it may, the mare took up the custom of rapping with her hind feet on the partition, especially at night. When Laddie went down to the barn on a certain occasion he found one of the boards of the partition badly shattered and the mare with tion badly shattered and the mare with a big splinter in the left hind foot.

Laddie took the sore foot up and found it hot and the ankle badly swollen. By using some diplomacy he got hold of a piece of the wood—which, let me say now, was oak and could not have been broken by any light blow and drew out a sliver about as large around as a lead pencil and not far from two inches long. Now the question was, "Is that all there is of that sliver?" and the chances seemed to be that it was not, but that there must be other pieces of wood farther up. So we called a veterinarian from the city twelve miles away.

The veterinarian suggested that we bring the mare to his hospital, and Laddie, always equal to any emergency, hitched her to an old carriage and started for the city through the cold. He never will forget that trip. It was terribly cold and the mare had to go increase. just about on three feet all the way. It took five hours to make the trip. It was after midnight when Laddie pulled into the hospital, tired and just about frozen to death.

The next day the doctor put the mare on the table and took out three or four more big pieces of that oak plank, besides a lot of tiny splinters. To make sure that the medicine got to the right sure that the medicine got to the right place, he opened a place higher up on the outside of the foot. Then with a syringe he could force the solution clear down through. We left the mare at the hospital a week, when Laddie came for her and took her home. Since then he has syringed the sore out himself, and the place is healing up nicely.

Now the question is what to do about the stall. I tell Laddie I think it would be a good plan to go out to the woods, get out a hard maple log and have it sawed into two-inch plank for the partition. It does not seem to me any living horse could shatter that plank.

Speculating on the probable cause of

Speculating on the probable cause of this habit on the part of the mare has brought to mind another mare which some years ago had the same notion of some years ago had the same notion of hammering away on the partition at night, and we made up our minds that it was because she was afraid of rats, which were pretty numerous about the barn at that time. Some horses are peculiarly nervous when they hear rats at night. I have wondered if this might not have something to do with the mare's disposition to kick. We mean to clear out the rats, anyway.

A Good Mineral Hog Tonic

THE hogs will make better and more economical gains for the feed consumed if they are supplied with a minsumed if they are supplied with a mineral tonic, and the rooting habit will be reduced where they have access to the tonic. The mixture should contain: Air-slaked lime, 2 pounds; common salt, 2 pounds; epsom salts, 1 pound; copperas, 2 pounds; slacked coal, 100 pounds. The copperas should be dissolved in boiling water before mixing, and all the constituents except the cop-A CREDITABLE authority of the and all the constituents except the cop-Northwest makes the statement peras should be mixed at one time. peras should be mixed at one time. Then sprinkle the copperas solution over the mixture to insure equal distribution of the copperas. The effect of the copperas in the mixture keeps the worms from infecting the swine that have this mixture constantly before



The unprecedented demand for horses and mules in Europe because of the war

has forced prices to a high mark

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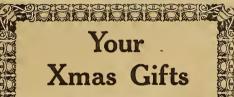
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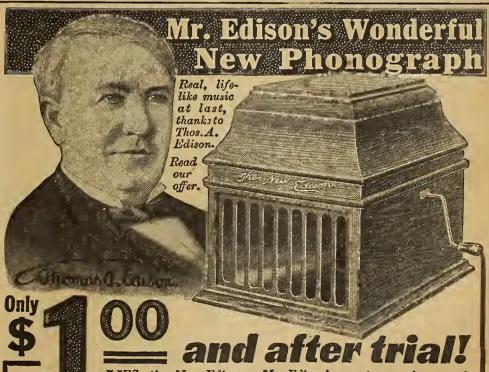
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This tale is of a man who ran away to come again another day. It makes a difference who does the proposing

A Leap-Year Thanksgiving

Three Johns and Only One Emily Tangle Matters Badly

By HILDA RICHMOND

OHN MARKHAM had broken the crank to the fanning mill in backing the load of seed wheat, which he was intending to clean, into the barn, and he was much put out about the accident until he remembered that old Mr. Cassidy had a machine of the same make. He put the horses in the barn and set out immediately. It was early in October and late for wheat-sowing, so the job had to

be done at once.

"I don't care what people say. I'm going to ask him to marry me. He'll be here Thanksgiving Day and I'll propose." John's hair almost stood up on his head as he neared the Cassidy farmhouse, for he recognized the voice of Emily Markham. "John has always been very nice to me, and it may be that he's only too timid to ask me-to marry him. I suppose all the women in the neighborhood will be talking about it, but John's a gentleman and he'll never let on but that he did it himself. Thank goodness! Leap

year comes once in a while to give—"

John waited to hear no more. He hurried away from the big, comfortable house, slipped home through the thin patch of timber, and at once began sowing the wheat uncleaned. As he worked, great beads of sweat rolled off his brown face, and he could hardly control the trembling of his hand as he urged the horses forward at all speed.

hardly control the trembling of his hand as he urged the horses forward at all speed.

"Emmy Markham planning to propose to me! Of all things in creation! I don't want to marry Emmy. She's a nice girl all right, and she'll make some man a fine wife, but she's not the girl for me. Why, we're almost related! Course I've taken Emmy to parties and concerts and I've been in and out there the same as if it was my own home. We've had our Thanksgiving dinners there since I can remember, and they've been with us on Christmas. I wonder what ever put the idea into the girl's head." The thoughts fairly raced through John's head as he tramped back and forth behind the drill through the mellow black soil.

and forth behind the drill through the mellow black soil.

"And if she asks me I'll have to say yes," groaned John. "No man who claims to be a gentleman could fail to say yes no matter what was going on inside. I'll have to hunt up somebody and get married right away to head her off. I wouldn't have Emmy disappointed for the world, but we never could be perfectly happy together. It stands to reason that a queer marriage where the girl had to propose would turn out badly. I know what I'll do. I'll take a vacation and go over to see Cousin Abel. I've always wanted to meet that pretty Amy Dobson again, but have been too busy this summer to get away. If I can manage it, perhaps the engagement can be announced before I get home and it will save trouble in every way. That's the best way out of the whole affair. I declare I do hope Emmy isn't really in love with me. I wonder who started this leap-year nonsense. I'd like to get hold of him and wring his neck."

O THE town tailor three miles away received a hurry-up order for a stylish fall suit, and John Markham arrayed in the latest and most approved fashion for young men set forth to visit Cousin Abel, ostensibly, but really to hunt up pretty Amy Dobson,

who had not been averse to his attentions the win-

to his attentions the winter before.

"You needn't hurry home," wrote his mother when he had been there a week. "Your father and the hired men are doing real well, for the work was mostly done when you left. Have a good time, for there seems to be much going seems to be much going on at Abel's and things are very quiet here. Jack Bentley is back from the West, and doesn't know whether he will return or not. We have a new minister since Conference, and folks say he is paying a good deal of attention a good deal of attention to Emmy Markham. He's a real good talker and nice-looking. Everyone is tickled over the prospect of a match, for Emmy would make an ideal minister's wife. Susan Green broke her ankle on the cellar steps last week and they have a trained nurse—" The letter ram-bled on with bits of neighborhood gossip, but

neighborhood gossip, but John saw only one item.
"Now I can go home in peace," mused John. "If Emily is taken up with the new minister she'll forget all about me. Such a stroke of luck! Amy has been acting rather high and mighty, so I'll show her that I don't

have to run after her. There is no reason now why I should hurry up and engage myself to her or anyone if Emily is in love with the new reverend. I don't think she ever did care for me except as a don't think she ever did care for me except as a friend, but maybe the fear of being an old maid put that absurd notion into her head. Let me see. I'll be twenty-nine my next birthday and Emmy is only a year or so younger. Gee, I'm glad to go home! This visiting stunt would kill me in a few weeks."

The very first evening John was home there was a church social, and he had the opportunity of meeting the new minister. He found him an earnest, gentlemanly young man of about thirty, athletic, enthusi-

manly young man of about thirty, athletic, enthusiastic and already deep in plans for the betterment of the neighborhood and the enlisting of the boys and girls in various activities. John thought he had never seen Emily appear to better advantage than when she stood beside the new minister making plans for a children's entertainment. Mentally he confor a children's entertainment. Mentally he contrasted Amy Dobson with her, and decided that Emily was far and away ahead of Amy in sterling qualities, though Amy was prettier and daintier.

JOHN found the time hanging rather heavily on his hands after the many social functions of Cousin Abel's neighborhood, so he set off one pleasant evening to call on Emily, taking care to choose an evening when the new minister was away marrying two parishioners at the other church which he served in connection with the Rose Hollow one.

"Why, Jack, hello!"he exclaimed in surprise on finding his old friend and schoolmate in Emily's parlor.

"Mother did write that you were at home, but I haven't had a glimpse of you. How is the wild and woolly West? Glad to see you looking so well!"

The time passed delightfully, and John stayed much longer than he had planned. Emily in a beautiful new frock looked as if she were not averse to entertaining her old friends. There was a sparkle and a vivacity about her that John had not seen before, or at least he was conscious of it for the first time, and he found himself wishing that Amy could see this beautiful young person who was never cool or indifferent to him.

"Why how do you do?" said the new minister as indifferent to him.

"Why, how do you do?" said the new minister as Emily answered a ring at the door bell about nine that evening. "The wedding was over early and I could not resist the temptation to stop as I saw your

lights burning."

"He's pretty far gone if he sneaks away from a wedding to come to see Emily," said John to himself. "Consarn it all! I suppose every time I want to run in a few minutes I'll stumble over him. I wish they had sent us an old man instead of this fellow."

John soon rose to go, but Jack Bentley showed no signs of moving

John soon rose to go, but Jack Bentley showed no signs of moving.

"I'm sorry you can't stay longer," said Emily as he shook hands all around and she went with him to the door. "Reverend Hunt and John are quite good friends, and they are planning to get up a little basket-ball team among the boys. You see, Mr. Hunt is lonely, knowing so few people here. You won't mention it, but his engagement is to be announced next month. I knew Evelyn in school, and that is the reason he confided the great secret to me. Come

again soon, John. Good night," she ended cordially. Halfway across the fields John Markham had a sudden thought, and the force of it made him lean up against a tree for support.

"It's John Bentley she's in love with!" he gasped aloud, and then looked guiltily around to see if anyone heard him. "What a dunce I was! Jack Bentley was always sweet on her at school and she liked him. She never scrapped with him as she did with me. John Markham, you need a guardian appointed for you. You certainly do."

John Markham was so humiliated by this discovery

you. You certainly do."

John Markham was so humiliated by this discovery that he could hardly venture to meet Emily for several days. He felt that he must beg her pardon and heights of his colossal egotism. disclose the depths or heights of his colossal egotism, but of course that was impossible. That he should but of course that was impossible. That he should actually run away from a pretty, sensible young lady like Emily for fear she would propose to him, when she had probably never thought of him in that connection at all, seemed the height of stupidity.

"But she's a thousand times too good for Jack Bentley," was his conclusion. "Jack's a good fellow, but when that's said, all is said. His roving disposition would wear out a girl like Emily. What a pity she should fall in love with such a man!"

Thanksgiving Day was perfect, and the guests

tion would wear out a girl like Emily. What a pity she should fall in love with such a man!"

Thanksgiving Day was perfect, and the guests assembled early at the Cassidy farmhouse just as they had done for years and years. John Markham was as gloomy as could be when he heard that Jack Bentley was to be one of the guests, but there was no help for it. When he arrived at the Cassidy house, the last one of the guests, he found Jack in the kitchen in an absurd white apron performing all sorts of little services for the ladies, and making himself useful in a way that John would have liked to imitate. It was no wonder everyone liked Jack, thought John wrathfully as he watched the little courteous attentions to young and old. Jack had the light and airy manner of doing things that most happy-go-lucky men possess, and it always made the other young fellows look heavy and awkward.

The dinner was all that heart could wish, but John might as well have been eating dust and ashes. As he wandered aimlessly about trying to lend a hand, as Jack was doing so successfully, and failing miserably in his imitation, he overheard a conversation not intended for his ears. It was in the big back kitchen where Emily and Jack had gone to see if the dessert of ice cream was properly ripened.

"John, dear, I suppose you've noticed that I'm specially interested in you" Emily was saying and

"John, dear, I suppose you've noticed that I'm specially interested in you," Emily was saying, and John Markham shamelessly listened. "It's leap year you know, and in spite of what everybody will say I want to marry you. I've waited all these years for you to ask me, but—"

DARLING, I never dreamed," began Jack in tender tones, and then John Markham remembered

der tones, and then John Markham remembered his manners and his disappointment in time to vanish.

"It's all over," he told himself gloomily as Emily and John appeared radiant and smiling to help dish up the big dinner. "He isn't fit for her to wipe her shoes on. What a chump I've been! I've lost her forever—the only girl I could ever love!"

"In a flash John Markham had his heart laid bare, and he knew without peradventure or doubt that for him life held nothing enjoyable from that very moment. Emily, his little sweetheart of boyhood days, his true friend in youth and his almost constant companion in social stant companion in social joys of later life—Emily proposing to happy-go-lucky Jack Bentley! It was simply maddening. And there was Jack laughing and joking with Bess Cassidy, Emily's frivolous cousin, about leapyear and his fear lest somebody should propose

to him.
"What's the matter,
John?" asked Mr. Cas-

John?" asked Mr. Cassidy with real concern.
"You look pale."
"And he isn't eating a thing," added motherly Mrs. Cassidy. "John, are you sick?"
"A toothache," said John, feeling the eyes of the assembled company

John, feeling the eyes of the assembled company upon him. "It will be better soon."
"Emily, go and get those hot drops in my work basket," said Mrs. Cassidy. "I keep them handy, for my teeth are so miserable."
"Never mind," said John hastily. "It's better now."
But everyone was

But everyone was talking about his ap-pearance and telling him



He found Jack in the kitchen, in an absurd white apron

of remedies for the toothache, so John had no alternative but to leave the table and apply some of the burning liquid to a perfectly sound tooth, with Emily holding the bottle and looking really concerned about his trouble.

"Don't you want to lie down on the lounge in the back sitting-room?" asked Emily in a low tone. "You look too miserable to eat, and if you go back to the table they'll all pounce on you with remedies and suggestions. Come on. I'll tuck you up with the hot-water bot-tle to your face."

John felt like a fraud and a dunce rolled into one, but the prospect of facing the tableful of people was not entic-ing, so he groaned as if in great pain and sought the seclusion of the back

"There!" said Emily as she tucked him under a blanket with little pats

and applied the hot-water bottle to his face. "Try to snatch a few minutes' sleep and forget your misery. I'll have to go and see if the dishes need replenishing, but I'll be back in a few minutes. I wish I could stay with you, but there are only three of us to wait table." "Never mind about me." groaned "Never mind about me," groaned John, feeling exquisite agony at her

touch and the sympathy in her tones.
"I'm so sorry to make this interruption" tion."

"Why can't you go with us this afternoon and have the tooth out?" said Emily, lingering at the door. "Mr. Hunt is going to drive me to Weaver's Corners this evening. You know I am the star performer in a little play the literary society is giving there this evening.

ary society is giving there this evening. You could go on to Danville in a few minutes and have the tooth out, and then come back and see me impersonate then come back and see me impersonate
the old maid in the play. I have to propose to John Smith, who has courted me
for years and— John Markham, are
you delirious? Don't throw the hotwater bottle away. It will help you a
great deal!"
"Tell—me," said a red-faced young
man scattering nillows and blankets

"Tell—me," said a red-faced young man, scattering pillows and blankets in wild haste, "are you engaged to Jack Bentley?"

"Of course not. What put such an absurd notion into your head?"

"I—I thought I heard you proposing to him in the back kitchen—it was partly accidental and—"

"I was making him coach me on my part of the play, silly! I've had so little time to learn it that I'm afraid of failing this evening. Let go my hand, failing this evening. Let go my hand, John. Those folks out there need more gravy and pota—"
"Let them need," said John recklessly.
"I need you. Oh, Emily, dearest, I wish you had proposed to me on leap year

you had proposed to me on leap year years ago. I love you! I love you! I love you!"

The guests at the Thanksgiving dinner party were highly pleased to learn that John Markham's toothache disappeared as suddenly as it came, and Mrs. Cassidy immediately bade her daughter find an empty bottle so she could divide the hot drops with John for fear an-other attack should come on. "I hardly think it will be necessary

for me to have a separate bottle, as I expect to hang around here a good deal during the next few weeks," said John unblushingly. "Emily's promised to marry me before Christmas, so I imagine that I'll be handy to your hotdrops bottle for a few weeks. Mother drops bottle for a few weeks, Mother Cassidy."

He stooped to kiss that astonished lady before the whole company, and the irrepressible Jack Bentley said at once:

"I'll bet a quarter Emmy proposed." And when John and Emily had a few moments together Emily said happily:
"Well, John, I'm glad I didn't have
to propose, but I was thinking of you every time I went over that play."

Learning the Way

By Aubrey Fullerton

DURING a camping-out holiday last summer, it fell to one of the party to make daily visits to the nearest farmhouse for supplies. The way led along a mile and a half of country trail, and a long walk it seemed at first.

But after two or three days the early morning jaunt lost its seeming tiresomeness, for, as one grew accustomed

someness, for, as one grew accustomed to it, there were landmarks all along the way that measured off the distance and, passed one at a time, they made the road seem very much shorter. When one learned to know the way it lost its

Sometimes it seems a long and dreary road that stretches ahead of us in life. So long it looks that passage of the years, and because we know so little of what is ahead, we find it hard and weary when we set out for ourselves. But presently we get to know it better, and this fuller experience of the years, like landmarks that shorten the trail, makes it easier to travel life's journey safely, without fearfulness and in the hope of coming joy.

Good-Health Talks

Suggested by Questions from Our Readers

By DAVID E. SPAHR, M. D.

Irritableness

LETTER was received the other day from a resident of an Eastern State in which the question "Is irritableness a disease?" was asked. Also, "How should it be treated?" The letter went on to state that this person knew a man who is married to a woman of a very amiable disposition, but that he snaps and snarls at

her the whole year round, pouting most of the time, complains 365 days in the year of not feeling well, yet eats three extra good meals each day, sleeps well and works every working day.

Irritableness is a disease that destroys the health and happiness of many. It seems to be epidemic also, by the number of cases I have come in contact with, and it is not always confined to the masculine sex either. I have heard of cases among women.

People suffering with certain forms of organic heart disease are inclined to be very irritable. Hence relief from heart disease does away with irritableness in a great many cases. A change of surroundings may help the chronic grouches who haven't heart disease.

Chronic Neuritis

Mrs. W. E. S. of Illinois is a farmer's wife and the mother of five children. Has suffered for three years with numbness and pain in her right arm and shoulder. It started three years ago when she was compelled to hold her baby so long, sometimes sleeping with it on her arm. She is compelled to sleep on her back, with her arm straight by her side to get any rest. If she raises it in her sleep she is compelled to raise up and beat the arm to get any feeling in it, and to relieve the pain. Her physician tells her it is a most incurable case, but she asks for advice.

WOULD advise rest in bed. Cover I the shoulder and arm with cotton, and use a hot-water bottle or an electric pad, and take a five-grain tablet of salicylate of strontium every three hours. The inflammation of the nerves has been so severe and of such long standing that it has caused degeneration of the nerve fibers. Your pain may possibly subside in time, but shrinking of the muscles may take place.

For Goiter

I am forty-nine years old and I have a goiter growing in my neck. It coma goiter growing in my neck. It commenced growing about two years ago. Could you tell me what to do to cure it, and what is the cause of goiter? We use river water for drinking and cooking purposes. Do you think that is the cause of it?

Mrs. Q. V., Oregon.

WE DO not know the real cause of goiter. It is said to be cured by drinking rain water, but river water should be as soft as rain water. Take five-grain doses of quinine hydrobromide three times daily, together with a one grain pill of ergot at the same time. This should be continued for at least two or three months.

Lime Water

How much lime must I use to make a pint of lime water?
T. P. F., Massachusetts.

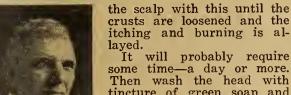
IME WATER is simply an ageous saturated solution of slaked lime, made by stirring slaked lime into pure water as long as it will dissolve, and a little more, keeping the bottle tightly corked and drawing off the clear liquid

Eczema Seborrhoeicum

About three years ago I began to About three years ago I began to have a very itchy scalp in spots, and finally spread all over my head, my face, and neck. My hair has fallen out badly, and my skin where affected is pitted with small pimples. My skin is so dry it almost cracks, and has a glazed appearance. The itching and burning is torture. The dandruff in my hair is like a vellow powder. After washing like a yellow powder. After washing my hair, my scalp is covered with ridges I have tar like welts, and is so painful that I can foul breath. hardly comb it.

Mrs. M. M. L., Montana.

GET eight ounces of oil of sweet almonds, and one-half dram of pure carbolic acid; mix thoroughly, and soak



some time—a day or more. Then wash the head with tincture of green soap and water. Reapply the oil and carbolic acid for a while. Then apply the following lotion daily: Resorcini, 20 grains; alcohol, 1 ounce; water, 1 ounce. Mix and apply

Shouldn't Drink Coffee

F. L. B. of Idaho writes that his wife is suffering with a very disagreeable and uncomfortable bloating of the stomach after meals; also is badly constipated. He also asks advice for himself, he has been laid up for two months with what he calls muscular rheumatism in his shoulder and arm.

OUR wife should quit coffee, if she Y uses it, and take from three to five soda mint tablets after eating, and a tablespoonful of paraffin oil on retiring at night. The latter for a laxative. For your neuritis I would advise rest in bed; cover the shoulder and arm with cotton, and use a hot-water bottle or electric pad, and take a five-grain tablet of salicylate of strontium every three hours. Have patience and you

Superfluous Fat

Is it safe for a woman to take medicine that is advertised for reducing fat? Am five feet two inches tall and weigh 194 pounds. My health is perfect, only am so heavy that my feet give out.
Mrs. B. J. B., Oklahoma.

No.

Cries at Night

My baby, age eight months, has indigestion and colic, and at meal time she cries so hard that I am compelled to give her a crust of bread. She nurses every two hours. I have not had a decent night's rest for months, as she frets so. She seems healthy enough, as she weighs more than eighteen pounds.

Mrs. J. A., Ohio.

BEGIN at 5 P. M. and give a one-half grain calomel tablet every half hour until six have been given. Follow this by a spoonful of castor oil in the morn-This will remove the gas and ferment from her bowels, and she will assimilate her food better and be more

Poor Circulation

I have poor circulation, cold feet, and do not perspire even in the summer. My general health is fairly good, but do not feel well. I am dizzy at times.

J. G. R., Kansas.

JOUR liver is at fault. Take a teaspoonful of fringe-tree comp. before

Tobacco Heart

I fear I have heart disease, but would like to know for sure. When I drop to sleep at night I awake with a start and queer feeling that is very annoying. Then I am so nervous I cannot go to sleep for hours. Do not notice it much in the daytime, but if I think of it my heart beats furiously on the slightest exertion. Stimulants do not help. I do not drink much, but am a heavy smoker. I am nineteen years old. If I am interested in something or talking or listening to music, I do not notice it. Sometimes I think it is hypochondria, for the more I think of it the more it gets me.

P. C. B., North Dakota.

You have a tobacco heart, caused by your excessive smoking. Cut it out or you will have functional heart trouble, of which your present symptoms are a simple foretaste.

Foul Breath

I have tartar on my teeth and a very oul breath. Mrs. C. H. S., Ohio.

MAKE a wash of one menthol comp. tablet to four ounces of water, and wash the mouth thoroughly as often as required. Have the dentist remove the tartar from your teeth.



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In which a father discovers that when a girl gets a notion in her head it takes more than mere paternal persuasion to get it out

Hearts and Hazards

Dame Rumor Gets Busy and Adds a Finishing Touch

By EDWIN BAIRD

PART IV

HERE'S WHAT HAS ALREADY HAPPENED: Ben Abbott learns that Henkel, a Chicago confidence man, is trying to induce Mr. Sage, Abbott's employer, to invest heavily in a scheme to manufacture gasoline at a penny a gallon. Abbott is in love with Gertrude, Sage's daughter, but, intoxicated with Henkel's pictures of city life, she tells Abbott she hates the farm. Henkel tries to get Gertrude's help in influencing her father, but the girl fails to deceive her parents, and her father orders Henkel to leave the city. As he is leaving his hotel with Blackie, his accomplice, he makes some unpleasant remarks about Gertrude. Ben overhears him and knocks him down.

YOUNG ne'er-do-well, Harris Satterlee by name, passed along the street in front of the Jefferson Hotel while the semi-unconscious Henkel was being carried therefrom. Beholding this

At a corner saloon he recounted the happening, with a decorative touch of with a decorative touch of his own, to the bartender. This gentleman, likewise embellishing, repeated it to all of his patrons that night. Each of these told another, and these told others still, and everyone enriched it according to his fancy.

enriched it according to his fancy.

Thus, on the following afternoon, Gertrude heard that Ben Abbott had followed Mr. Henkel to the Jefferson Hotel, had there assaulted him with brass knuckles, and had kicked him repeatedly while he

him repeatedly while he lay prone. The attack was wholly unprovoked. Henkel was going peacefully about his business, with enmity to none, when Ben, without warning, rushed murderously upon him. So facesions was he indeed that four men were needed ferocious was he, indeed, that four men were needed to drag him from his prostrate victim, and even then he had continued to spout profane epithets, shrieking madly: "Let me kill him!"

Ordinarliy Gertrude would have laughed at this

blood-curdling absurdity, but in her present mind she was willing to believe anything of Ben. She swallowed the garbled gossip whole, concluded he had gone insane with jealousy, and, far from being disposed to laughter, she flamed with blazing hatred.

THIS upflare, not cooling, found a satisfactory outlet that evening when her father came home from his office. She ran to meet him at the door, and her eyes were flashing and her small fists were clenched till the knuckles stood out white.
"Dad," she stamped, without preliminary, "you've got to discharge that—person!"
"What's this?" gasped Sage, swept off his feet by the tempestuous greeting. "Which person? What do you mean?"

do you mean?"
"I m-mean that c-cowardly bully," she rushed on, struggling to control her quivering voice—"Ben Abbott! It's disgraceful! I never heard of such a bott! It's disgraceful! I never heard of such a thing! He's the lowest, cruelest, most miserable man that ever lived, and if you don't d-dismiss him ininstantly—I-I—" She was forced to stop. Her voice, rising shrilly, had escaped from all restraint. "I see now what's wrong," said her father. "Possibly, if you had heard the truth—"
"I have heard the truth!" she raged, unable to keep still upon this allustion. "It's you who've been misinformed. And anyway, he's twice as big as poor Mr. Henkel, and three times as strong, and nothing could

Henkel, and three times as strong, and nothing could

excuse his cowardly conduct—nothing?"

"He must have had some reason—"

"Reason?" she screamed. "Is there any reason for breaking a man's nose with brass knuckles, and kick-

ing his face when he's lying helpless at your feet, and jumping up and down on his chest, and—and—Did he give any reason for that? Did he show one single cause for almost killing Mr. Henkel?"

"I have it on good authority," replied her father, "that none of those things occurred. Only one blow was struck, and it was all over."

There now came a lull in hostilities, due to the arrival of Mrs. Sage. Brought hither in alarm by her daughter's piercing tone she managed to effect a

her daughter's piercing tone she managed to effect a temporary cessation, but the storm broke out afresh

"DAD," began Gertrude, who had acquired a semblance of calm by now, "are you going to discharge Ben Abbott?"

"Why, no. Why should I?"
"Then you don't believe he's acted in a way so utterly disgraceful—"

son Hotel while the semi-unconscious Henkel was being carried therefrom. Beholding this procession, he paused to inquire: "What's up?"

Blackie proved uncommunicative, but the negro footman had no such taciturnity in his nature. Directly the taxicab had departed, he explained with gusto, illustrating his discourse with gesticulation:

"Big man, name' Mist'
Abbott, sail into 'is Chicago generman wif both fists. Chicago generman ain't done nothin', 'tall.

Mist' Abbott pow'ful big man, an'—"

"But what did the other man do?"

"He ain't done nothin'," repeated the negro with emphasis. "He standin' in hotel, talking' peaceful, when bang! Mist' Abbott bust 'im in de eye and fotch ' im a pow'ful clip on de jaw. Chicago generman ain't stan' no chance, a tall. You ast me, I say it come fum cussedness."

... The negro narrated subsequent events with similar lucidity, and Satterlee went his way, musing.

At a corner saloon he depression was due to anything antedating the quarrel, she resolved to intercede.

"Ben," she said to him on this evening, "don't you think if you went to Gertrude and explained, or maybe apologized, you might end all this disagreeable feeling?"

He was working in his garden at the time, a spot that received his initial attention every day when he - JOHN EDWIN JACKSON-

"Dad, are you going to discharge Ben Abbott?"

"Certainly not. Fact is, I feel like commending him. I think he did a praiseworthy job."

"And you can say that!" Gertrude's anger, temporarily quiescent, was beginning to boil again.

"Why not? This scoundrel he thrashed is thoroughly worthless. Besides, I'm quite convinced he had a good reason for thrashing him."

"Do you know what his reason was?"

"No. I didn't ask him, and he volunteered no in-

I didn't ask him, and he volunteered no information. In fact, he hasn't mentioned the affair at

all. I only heard of it indirectly."

"And what did you hear?" asked Gertrude, restraining herself with a perceptible effort.

"I heard that it all sprang from something Henkel said. Ben overheard him."

"Then you t-think—" she hesitated a moment, afraid of her voice—"you think just because Mr. Henkel said something Ben Abbott didn't like that was cause enough—"

was cause enough—"

"Now see here!" cut in her father, lowering his knife and fork. "This discussion has gone far enough. You've got to dismiss this blackguard from your mind, once for all—"

"I won't!" she exclaimed, and brought her fist down beside her plate. "And I'll never forgive you, either, unless—"

either, unless—"
"Don't, dear, don't!" anxiously interposed Mrs.
Sage. "Please do as your father says." But this
frantic effort to still the mounting tempest was swept

Headless of her mother, the girl ruthlessly aside. Heedless of her mother, the girl plunged violently on.

The storm mounted. The dining-room rang with three excited voices, all speaking simultaneously. And when at length the hubbub was over, Gertrude was in tears and her father was wondering, as many a troubled parent has wondered, "What shall I do with her?"

More distressing still was the aftermath of the storm: Gertrude's attitude toward her father grew coldly aloof; she rarely appeared at table while he was there, and finally she refused to speak to him. Her silence reiterated what she had started to say to him that night: "I'll never forgive you unless you discharge Ben Abbott."

discharge Ben Abbott."

And Ben, the real, if unwitting, cause of the dissension, was least affected by it. He perceived nothing untoward in Sage's manner, and he never would have learned, perhaps, of the strife he had engendered, had it not been for the Sages' maid, Lena. To the cook next door Lena confided the state of affairs in her employers' household, and this cook in turn whispered the tidings to a friendly washerwoman.

Servants' gossip travels fast and is not always confined to their particular circle. Before the week was done. Ben's mother was possessed of everything per-

done, Ben's mother was possessed of everything pertaining to the Sages' "family row," and more besides. The news vexed her keenly. She had noticed of late that Ben was in low spirits, and, never supposing his depression was due to anything antedating the quartal she resolved to intercede

garden at the time, a spot that received his initial attention every day when he returned from work, and she waited anxiously for his answer while he hoed the tomato plants.

"Explain what, Mother? I haven't the slightest idea why Gertrude is cross with me. And besides," he added, extracting a weed and tossing it into the alley, "I couldn't explain or apologize if I wanted to—or knew how or why I should do either. She wouldn't let me. I met her on the street to-day, and when I spoke to her she looked the other way."

"I think, dear," said his mother gently, "it's because of your—because of the unpleasantness at the Jefferson that night."

"No; that's not it. She snubbed me twice before I went to the Jefferson."

"Then why—" began Mrs. Abbott, very puzzled, and suddenly stopped. A light was breaking upon her. "Ben," she asked sharply, "haven't you heard what's happened at the Sages'?"

He was stooping in the act of pulling another

He was stooping in the act of pulling another weed, but he abandoned the task to look up with a natural inquiry: "Why, no; what's happened there?"

Her dismay was nitiable

Her dismay was pitiable.

"Why, I thought of course you knew. I'm sorry—
I shouldn't have spoken—if I'd only known—" She
paused in confusion, unable, it seemed, to disembar-

"What's happened, Mother?" he asked quietly "Ben, I see a big tomato worm on the vine behind you. Don't you think—"

"I THINK," he said slowly, without noticing the worm, "I begin to understand Gertrude is angry because I knocked Henkel down, and she wants me to— But what does she want me to do? I can't apologize to Henked—he's probably in jail by now—and I wouldn't anyway, even if I could. And if I go to her house she won't see me; so what can I do?"

Mrs. Abbott. recognizing the futility of further

house she won't see me; so what can I do?"

Mrs. Abbott, recognizing the futility of further dissembling, suggested:

"You might tell her father, Ben, exactly what caused the quarrel. I hear she has accused you of striking Henkel without provocation, simply because he was smaller than you. Of course I don't believe—"

"Who told you that?" he demanded.

"Well," smiling faintly, "it didn't come from a very authoritative source. The grocer's boy told me."

"Do you know who told him?"

"The Lyttons' chauffeur, he said. The Murrays' gardener told the chauffeur, and the gardener heard it from Mrs. Nolan's parlor maid. That's as far back as I can trace it."

as I can trace it."

Ben flung his hoe down and stared at the freshly turned earth. So this thing had spread all over town without his hearing a word of it! He alone, apparently, had been unaware of what everybody else known for days! . . . After a pause he heard his mother speak, and her voice seemed to come from a

great distance:
"Don't suppose for a moment, dear, that I place much credence in what these people say. The most of it, I know, is nothing but tattle. But I still believe if you went to Mr. Sage and told him—"

"No," he said gloomily, shaking his head. "It wouldn't do any good. If she's capable of believing a thing like that of me, she wouldn't believe a word I'd say."

that of me, she wouldn't believe a word I'd say."

"What was the cause of the fight, Ben? You've never told me."

"I haven't told anybody," he murmured, still staring morosely at the ground. "Only two people in the world know—Henkel and myself."

"But I don't see why, if you were right and he wrong—Ben, won't you tell me why you did it?"

He considered her question in silence

He considered her question in silence, and for a moment was on the point of telling her. But finally he said:

"No. I think not." and put on his hat and moved toward the street.

"Where are you going, Ben? Sup-

per's almost ready."
"I may be a little late for supper; so

don't wait for me—you and Lucy."
"But, Ben! Where are you going at this hour?" Continuing streetward, he called back

to her dully:

"I'm going over to Mrs. Nolan's—to see her parlor maid."

Unlike his mother, Mrs. Nolan's parlor maid had no scruples in passing along the gossip which had reached her ears at third or fourth hand. She spoke

loquaciously on the matter, and who shall deny that she added thereto a little adornment all her own? In any event, Ben went from her directly to Mr. Sage, and his mood had

waxed more gray than ever. He found Sage on the veranda of his home, smok-ing a cigar in solitude and gazing fixedly into the late summer dusk; and

his mood, too, as any might have seen, was not a cheerful one.

He brightened considerably, however, as Ben approached.

"Well, by George!" he exclaimed, rising delightedly. "Come up and have a seat. It's hot as blazes in the street tonight, but cool here. Mother," he called through the doorway behind him, "here's Ben!"

Ben!"

But Ben remained standing near the bottom of the steps.

"I only stopped for a minute, Mr. Sage. Don't call her. I only want to say I am going to quit my job at the end of this week."

Sage's demeanor promptly changed. His surprised pleasure fled, and an expression of pain crossed his large face. Before he could shape his mind for speech, his wife came out from the hall, her eyes radiant with glad welcome.

"Ben, this is a pleasure! We don't often see you here. I hope—" She halted, suddenly struck by Ben's peculiar look, and glanced questioningly from him to her husband. Then, as a quick suspicion became definite in her quick suspicion became definite in her mind, she murmured something about a forgotten duty indoors and neatly with-

Sage was now standing at the head of the steps, looking sorrowfully down at

Ben.
"I've been expecting this," he said in a low voice, "for some time. You've heard, then?"

heard, then?"

"I-I—you mustn't misunderstand me," stammered Ben, utterly taken aback by this unexpected thrust. "Philip Lukens, the man who leased our farm, was in town not long ago, and he said he'd grown tired of country life and wanted to get back to the city, so I thought—I've always loved farm life, you know—I thought I wouldn't wait till September—".

"When did you see Mr. Lukens Ben?"

"When did you see Mr. Lukens, Ben?"
"It was on the night—that night at
the Jefferson."

"More than a week ago. And you've been all this time making up your mind?"

Subterfuge was never easy for Ben. He started to speak, found he had nothing to say, and replied, instead, with a barely perceptible inclination of his

Sage descended the steps and took his

"Come; let's take a stroll through the yard, Ben. Maybe we can reach a better understanding."

But Ben hung back; and, to bolster But Ben hung back; and, to bolster his strength, he repeated to himself something the parlor maid had told him: "Miss Sage said that if her father didn't fire you, she'd never speak to him again as long as she lived."

"I'd rather not, Mr. Sage. It wouldn't change my decision anyway."

"Then you're determined to quit me?"

"Yes, I think it'll be best for me to leave."

"Well before you go tell me this

"Well, before you go, tell me this. You're not leaving because you want to return to your farm, but because of what happened that night at the Jeff. Isn't that so?"

[TO BE CONTINUED]

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The Kitchen Floor By Mrs. Ethel E. Welch

ALTHOUGH the use of linoleum, oil-cloth, or paint on a floor has become very common, yet hundreds of women living on farms must still struggle with the problem of keeping a floor of bare boards clean and attractive. Of these the greater number no doubt still use the time-honored methods of our grand-mothers. A little thought will save much labor in this as well as other household tasks.

Neither soap nor lye should be used on pine or other soft-wood floors, as either will make them yellow or cause them to splinter up. When grease is spilled on the floor, at once cover the spot with baking soda. After it stands a few minutes, rub the soda gently into the spot with the hand or a cloth until the grease begins to disappear. Pour hot water over the spot and wipe up with the mop. Old grease spots can be removed in the same way if the process in proported from the same way if the process. is repeated from day to day. On regular scrubbing days after the floor is swept sprinkle a little soda on all greasy or especially dirty spots. Pour hot water over these spots and scrub them, then mop the whole of the floor with plenty of clear water either hot or cold.

A neglected, dingy floor can be quickly improved by scrubbing with a little fine sand or with scouring soap. First wet the floor with a little hot water, then sprinkle with sand or shaved scouring sprinkle with sand or snaved scouring soap. Scrub well and let dry without rinsing or mopping. When thoroughly dry, sweep to remove the sand, and mop with clear water.

Old stocking tops make the best of mop cloths, as they are very absorbent,

wear well, and do not leave lint or ravelings on the floor. A long-handled scrub brush holder can be purchased for a few cents and will make scrubbing much easier than when the brush alone or an old broom is used.

Books for the Baby

By Pearl Chenoweth

THE foundation for the best literary education must be laid in infancy. The child who does not have the needed literature between the ages of three and five misses a valuable part of his education which nothing in later life can quite recompense. In every mother's day there should be an hour set apart for reading to the children. No duty can be more important. No pleasure should be greater. Melodious rhymes often repeated to a child give him a sense of rhythm and melody, as does the hearing of good music. Long before he can read he should know the best of the Mother Goose jingles. A collection of these with beautiful illustrations may well be the first step toward giving your child the library

Queen Bertha, the goosefoot, of ago. Loving mothers have been repeat- ing.

ing them ever since because her great son, Charlemagne, after becoming famous, wrote from memory these stories, making of them the first printed collection. Remembering his early childhood with love and gratitude, he gave the book the name of "Mother Goose's Melodies." The best folk tales from every nation were added as time went on. They now form a part of the birthright of every child

of every child.

A certain little girl of eight summers found her way into good literature through the medium of "Alice in Wonderland." She read it through five times with increasing interest, and is now eager for other books of similar or greater value. It is doubtful if this child would read a worthless produc-tion after becoming so familiar with a real work of art.

Grimm's and Andersen's fairy tales should be told, not read, to children under five. While they will not fully comprehend them, the young listeners will receive lessons in wisdom from them. Every child should know numerous quotations from the Book of Proverbs. For a book to read to the baby nothing excels Helen Hunt Jackson's "Cat Stories," unless it is Stevenson's "Child's Garden of Verses." Even if the baby fails to give undivided attention, he will still be benefited. A pleasant voice and a few timely gestures will help to hold his attention.

Some nursery stories which are now considered classics are "The Three Bears," "Little Red Riding Hood," "Hop o' My Thumb," and "Cinderella." References to these are found in the world's best literature. Every child must know them early in order to enter fully into the spirit of them.

Fresh Greens in Winter

By T. H. Garekol

FIND much pleasure in having a A kitchen garden on a sunny window sill during the winter, and the bits of fresh greens that can be gathered in it give flavor and character to many soups, salads, and sauces. A few flower pots and wooden boxes, some fine pulverized rich earth, reliable seeds, and some patience are all that you need to succeed. With me the first thing to plant is parsley. It is excellent for flavoring and makes a fine salad. A few six-inch pots filled with parsley will give a supply for months, as the pickings may be repeated over and over again. The Fine Curler is the most desirable variety for the purpose. Fill the pots full to the top with rich earth, sprinkle the seeds over it, add a little more earth mixed with sand, sprinkle with water, and stand in the sun. Keep the earth slightly moist until the seeds come up. As the seeds germinate very slowly, it is a good practice to soak them twentyfour hours in tepid water before sowing. Spread them on a blotter to absorb the superfluous moisture, and then mix them with a little dry sand so that they can be easily handled.

Onion seeds can be planted in a rather deep box filled with very rich black earth. These are delicious for cutting when they are no bigger than a small radish, to give flavor to salads, and the flavorsome ends can be used in the soup

It is easy to plant a few successions of mustard in a rather shallow box filled with finely pulverized rich earth. Sprinkle the seeds, cover them lightly with rich earth mixed with sand, water them and wait. The little mustard plants cut off from their roots, chopped and added to salads, give a delightful savor. Peppergrass seed can be grown in the the old folk fairy tales three centuries same way, and proves equally interest-

Cookery

Using the Oven By Mrs. Hayes Bigelow

THE range oven should be more generally used by housekeepers for cooking meats usually fried or boiled on top of the stove. The oven keeps odors from spreading and keeps the steam from covering windows in cold weather. Baron placed in a broiler and then put in covering windows in cold weather. Ba-con placed in a broiler and then put in a dripping pan and set in a moderate oven will be crisp and delicious, free from grease, and there will be no greasy smoke to go through the house. Pork chops baked are superior to those fried. Try putting a small slice of onion on each chop. Ham, beef, and meats requiring long boiling should be closely covered in a large lard pail and cooked in the oven for several hours, when they will be deliciously steamed and tender, and no goodness has escaped. Fish may be boiled in the oven equally well.

To economize on lard get some beef suet, cut in small pieces, and try it out in the oven. It goes farther and is much cheaper. If the oven is too hot

the fat may burn enough to color, so use a moderate fire.

After using the oven for these and many other things you will not go back to frying on top of the stove with spattered grease to clean up.

IN SELECTING THE TURKEY, the age of the bird is the chief consideration. A young bronze turkey has smooth black feet, an old one rough feet of a reddish color. The time required for roasting a ten-pound turkey is about two and one-half hours. The oven must not be too hot or the flavor and quality will suffer. M. L. E., Oregon.

SPLIT-PEA SOUP-Soak one cupful of split peas overnight. In the morning drain and add three pints of cold water and half an onion. Cook until peas are soft, then strain, and add salt, pepper, one teaspoonful of sugar, one-half teaspoonful extract of beef, three tablespoonfuls of butter, and two tablespoonfuls of flour, and lastly one pint of milk. C. B., Vermont.

DATE SALAD—Stuff dates with nuts. Serve on lettuce with any good boiled dressing. This can be varied by using cubed pineapple, dates, and chopped nuts served on lettuce with salad dressing. Many people like prunes instead of dates in the salad. C. M., Illinois.

QUINCE HONEY-Make a syrup of one quart of water and three pounds of sugar. Boil ten minutes after boiling begins. Take five good ripe quinces, grind through food chopper or grate, boil them in the syrup for ten minutes.

M. B. C., Nebraska.

CANDIED CRANBERRIES-Boil four cupfuls of sugar and one cupful of water for five minutes. Wash and drain one quart of cranberries and pick them over carefully. Have the berries dry, spread boiling syrup over them. Let stand overnight, then return to the fire and bring to boil. Repeat the process three times, then drain off all the syrup and the berries will resemble candied cher-ries. H. I. O., Oklahoma.

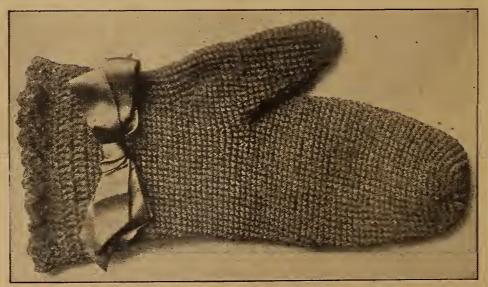
HONEY FRUIT CAKE-Three-fourths pint of strained honey, one-half pound of sugar, one-fourth pound of shredded of sugar, one-fourth pound of shredded citron, whites of three eggs, one-half pound of chopped almonds, one teaspoonful of cinnamon, flour, one teaspoonful of baking powder. Beat the whites of the eggs, beat in the sugar and honey, add the cinnamon and the baking powder sifted with sufficient flour to make a soft batter. Stir in the citron and almonds and drop on buttered tins. Bake until a light brown in a moderately hot oven.

L. M. T., California.

SPONGE CAKE—Four eggs, separated, two cupfuls of sugar, two and one-half cupfuls of flour, and flavoring. Beat yolks of eggs and sugar very light; add beaten whites, then flour with two teaspoonfuls of baking powder sifted in, last of all one cupful of boiling water. Bake in four layers. Filling: One-half pint of cream beaten stiff; add sugar and one teaspoonful of vanilla. Spread between layers when cold.

F. L. D., Ohio.

Child's Crocheted Mittens



VERY simple stitch is required to make these warm little mittens for A VERY simple stitch is required to make the state of the the children. For complete directions send four cents in stamps to the Fancy Work Editor, Farm and Fireside, Springfield, Ohio.



Tumble-Heels

By Fannie Wilder Brown

Part I

NO MATTER how dark and rainy the day, the old Barton farmhouse never

was gloomy long at a time. Once in a while Mother sighed as she Once in a while Mother sighed as she stitched away at the many garments needed to keep six active little bodies and five big ones properly clothed. Sometimes Grandmother's patient fingers ached as she pushed and pulled her darning needle through the holes in twenty-two pairs of stockings. Often Aunt Susan rattled the stove lids furiously because she was hurrying so to Aunt Susan rattled the stove lids furiously because she was hurrying so to finish ironing the great basketful of clothes before dark. But at quarter before five, when Tumble-Heels came flying up the hill on her way home from the district school, bursting into the house like a young whirlwind before her seniors Dick and Dolly or her juniors Jack and little Jill had so much as rounded the corner down by the brook, everyone began to cheer up.

Tumble-Heels was a round, frecklefaced, short-haired child, always having accidents to her belongings, her clothing, or herself, and always saying or doing something ridiculous. But jolly good humor twinkled in her goldenbrown eyes, tip-tilted her freckled snub nose, curved her lips into a Cupid's bow, and pressed the dimples in her cheeks

and pressed the dimples in her cheeks deeper and deeper as the days went by. Suddenly she shot up so tall that her

skirts had to be lengthened to her boot Then Aunt Susan tied the redbrown hair on the top of the child's head and at the nape of her neck with great bows of peacock-green ribbon, and Dick announced to Dolly that he was going to save Tumble-Heels to use her for a bean pole in his garden some

But the girl was in no hurry at all to grow up, and quite resented it. She loved to romp and play as much as ever, and could not believe that the time ever would come when she would care for

would come when she would care for any quieter kinds of fun.
"Don't you ever keep still long enough to think about anything?" Grandpa asked severely one cold March Saturday morning. Tumble-Heels already had been the victim of several extra careless assistants that day

accidents that day.

"My think mill works fastest when I fly around most," she said, putting another stick of wood into the fire and drawing Grandpa's chair closer to the stove. "I have to wind my think mill up twice a day and shake it after winding, like the kitchen clock." By this time she was balancing herself on one are two confoot on the back round of a splint-bot-

tomed chair. The round broke, and down went Tumble-Heels, flat on the

Grandpa laughed till he had to wipe his glasses with his red pocket handker-

"You'll get your lesson some day," he said, shaking his head, "but it'll take a good deal of training to steady you down."

down."

"I don't mean to break things," the girl said ruefully, "and I'll bargain with Dick to put another round into the chair." Then she slipped into her coat, hood, and mittens and danced off into what she called "all out doors."

A heavy late snowstorm followed by rain, freezing as it fell, had covered the fields with deep snow and a glare of icy crust. Tumble-Heels had her own sled, a big, strong one her father had made purposely for her last year. For Tumble-Heels never could bear to wait for Dick and Dolly to drag the long double-runner back up hill after they and Jack and Jill had coasted down. And she liked to do her own steering, she said; but the other children knew that she liked best not to steer at all, but to let her sled go wherever it would. She seemed quite indifferent as to whether it stopped, as when steered, at the rise before the corner where the rail fence met the stone wall, or slid under the fence at the left at the risk of leaving her scalp hung on the fence, or dashed into the wall at the right. Here in the home fields she still coasted by throwing herself down full length on the sled, steering, if she steered at all, by digging the toes of her boots into the snow far behind.

That particular March morning, after taking two or three turns safely, Tumble-Heels tried coming down once without a retarding steer. As she neared
the foot of the hill, finding herself in
danger of losing her brains against the
stone wall, she rolled off her sled and
went gliding along after it into the wall.
Crash, toppled a big stone down on
the sled, crushing one runner. TumbleHeels escaped with only scratches and
bruises and a few half-angry tears.

[TO BE CONTINUED] ble-Heels tried coming down once with-

New Puzzles

Around the Turnip Patch

The March hare, the ground hog, and the field mouse arranged to race round and round the turnip patch. When the bullfrog croaked "Go!" the three contestants started off at the respective speeds of 8, 17, and 26 feet per second, and when they came together for the first time they needed 250 feet to complete a lap.

Who can tell how far the fleetest runner of the three had traveled?

Answers to Puzzles

Puzzles Printed Last Issue

At the Wash

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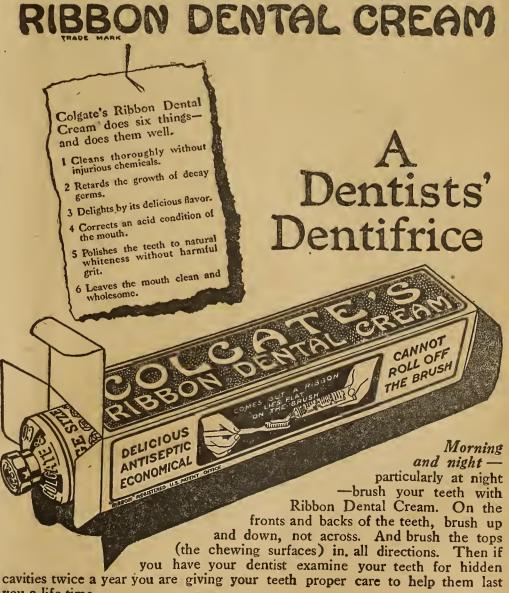
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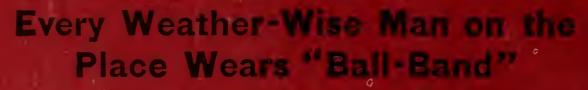


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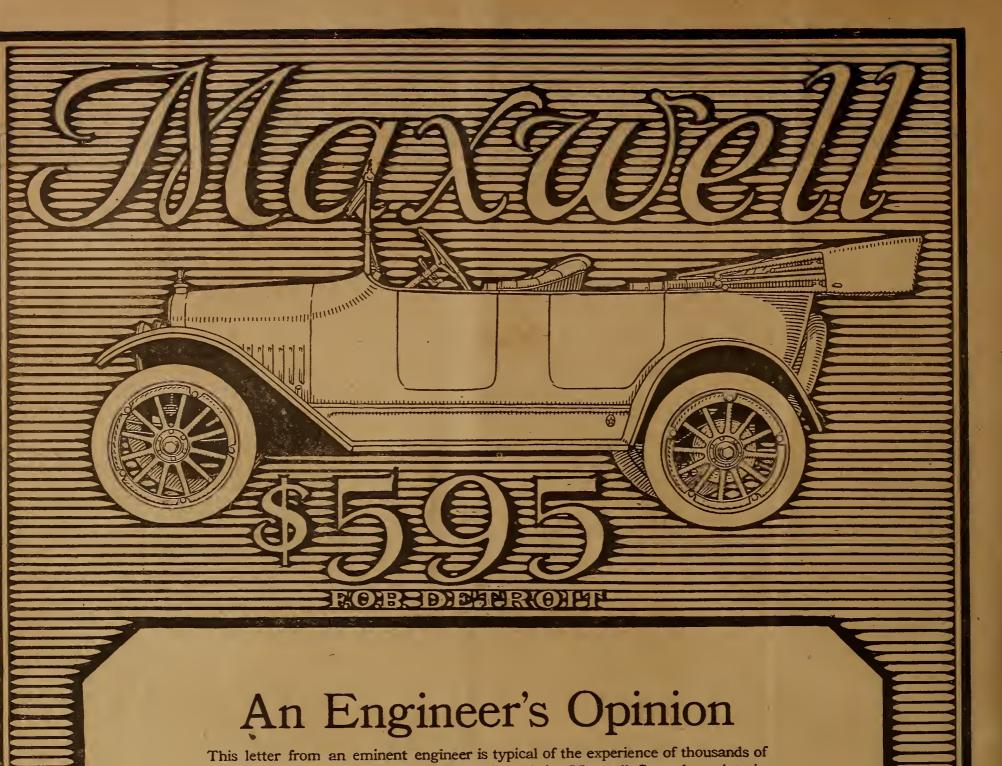
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5 cents a copy

Saturday, December 2, 1916



There sat Frizzly and the schoolmarm-See page 7



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No. 5

Where Brush Became Coin

How a Hill Was Changed from Foul Thicket to Rich Pasture

By H. H. SHEPARD

TEARLY every visitor to our rough hill farm this fall asks: "Why don't you keep goats instead of sheep for clearing the rough acres?" As many persons are making plans now for next year I will relate our experience with sheep.

relate our experience with sheep.

One reason why we don't keep goats instead of sheep is that we are prejudiced against goats, perhaps unjustly. We have never had any experience with goats, would not know where to go to purchase a good flock, and do not know how valuable they are in general. It goes without saying that goats are not as salable as sheep and lambs, that they do not bring as much money on the open market, and that goat meat is not as popular as mutton, although it may be as good. Goats do not shear as much wool as sheep, and the wool does not bring as much money, except for the long, lustrous mohair from the best Angoras.

No doubt, goats are excellent for clear-

No doubt, goats are excellent for clear-No doubt, goats are excellent for clearing brushy land, but sheep are also good, as we have found during the last three years in running them in foul hill pastures. When our pastures were cleared some years ago of trees and bushes, there immediately sprung up in them millions of rank weeds and sprouts. Among the worst of the wild stuff was the iron weed, which our cattle and horses would not touch. The growth had become so rank and thick that it had practically crowded out all grasses and clovers.

Sheep like iron weeds almost as well, if not as well, as good grasses. By the end of the second summer our sheep had almost completely cleaned all the pastures of this weed pest, and our flock is not yet large in comparison to the acres grazed. A number of other troublesome weeds in the pastures they have completely killed out. I doubt if goats would have done a better job.

Of bushes and sprouts, sumac was the thickest and

done a better job.

Of bushes and sprouts, sumac was the thickest and rankest in our new pastures. Old sheep like sumac leaves "like candy." A ram or a ewe will go to a sumac bush in full foliage and completely defoliate it before leaving it if the bush is not too large and the sheep is not disturbed in its feeding. Of this pasture pest, sumac, which we supposed years would be required to eradicate, now scarcely a plant can be found. They have been killed out literally as dead as door nails. Goats could not have done the job better.

Another bush pest in our pastures was buck brush, or turkey brush. This grows in dense colonies or thickets, completely crowding out all other growth. We had one small pasture about half covered

pasture about half covered with buck brush. The flock with buck brush. The flock of sheep was turned into this pasture for about a week last year, and the brush at the end of the time looked like it had been ravished by army worms. It was completely defoliated, and much of the younger growth eaten and tramped to death. This year the growth of brush is much thinner and grasses are now growing grasses are now growing among the bushes. With a little more sheep-pasturing they will have been completely killed out. Colomics of bush by which in other nies of buck brush in other pastures have been thinned by sheep browsing, so that now grasses grow among the bushes, and cattle and horses graze among them where they never grazed

where they never grazed before.

I have observed the sheep grazing and browsing in our rough pastures, and found that they eat the leaves of all bushes and sprouts except hickory and walnut, and of all EW



This flock returned more than 100 per cent profit in one year, counting their work renovating a hill pasture.

weeds except mullein. Of course the sprouts and bushes must be comparatively low for them to reach the top leaves; they will not climb as high as goats to secure feed. If the larger sprouts and bushes are cut, sheep will eat and kill the young growth and eventually kill out all the undesirable growth except hickory and a few others.

Sheep Eat Many Kinds of Weeds

In THE matter of renovating a foul pasture with sheep, remember the animals like some weeds and sprouts better than others. Do not expect the flock to start in at one end of the pasture and make a thorough cleaning as they go. They will not do it, but roam the whole pasture. They eat first what they like best. Hence the weeds and sprouts they like best will naturally be killed out first. Then, when they have eaten and killed out their choice of foul growth, they will begin on less desirable kinds to their taste, and so on. But in their daily rounds of a pasture

they will eat a little of a great many kinds of plants, hence if the pasture is limited and the flock comparatively large, a good showing in the reduction of undesirable growth will be made every week of the growing season of the growing season.

of the growing season.

A small brushy pasture can be absolutely cleaned of noxious growth within a short time with a large flock of sheep if the sheep are confined exclusively to the pasture. This, however, is not desirable, for the rough forage might not be a well-balanced ration for the animals, especially during the spring and early summer for ewes with lambs at their sides. The ewes would need a better diet to furnish sufficient milk, and the lambs would not be able to secure enough good, succulent food.

A good way to compel sheep to com-

A good way to compel sheep to completely renovate a small foul pasture is to turn a large flock into the small pasture every night, and run them in a better pasture during the day, or to feed the sheep extra for one or more meals each day. This gives the animals the needed variety and at the same time compels them to eat nothing but sprouts and coarse weeds for a part of each day, thus completely cleaning some ground. The smaller the pasture the sooner it will be cleaned. cleaned.

Another good way to clean completely a piece of weedy or brushy land with sheep is to fence a small portion of it temporarily, using the portion to be cleared for a night pasture. When one spot has been cleared in this manner, the fence may be moved to another foul spot and treated in the same way. Often this manner of killing out undesirable wild growth is much faster, cheaper, and better than grubbing, while the wild growth is of some actual food value to the animals, and when a piece of land has been renovated in this way it becomes highly fertilized with the concentrated sheep droppings, and will then support a luxuriant growth of grasses and clovers. The same method can be used with cattle and horses. The concentrated tramping of the heavier animals is effective.

We have been keeping sheep now for three years, and have found them very profitable. Counting the value of renovating our foul pastures, they have given more than 100 per cent net profit on the original investment in stock, and the market value of the flock taken at the end of each year. The first year they

taken at the end of each year. The first year they gave something over 130 per cent net profit on the

investment in stock, after deducting the cost of winter feeding.

It might not be profit-able for the cattle farmer to keep sheep, for a barbedwire fence that will adequately turn cattle would not keep sheep in bounds at all. A tight-woven fence is necessary, such as is used for hog pastures, but rather higher on an average. Where a good number of hogs are kept on the farm and grazed in several different pastures, the keeping of sheep becomes profitable, for the same fences will turn both kinds of animals, and will also serve for other stock as well. The whole farm should be fenced and crossfenced with woven wire if sheep are to be kept with much profit and the whole farm renovated and fer-tilized. The animals would tilized. The animals would not remain healthy and thrive well if confined closely to one pasture the year round. We have five different pastures fenced with woven wire, and move the sheep from one pasture to another every week or two, according to the [CONTINUED ON PAGE 18]



Here is a ewe that has maintained herself, fed her twin lambs, and has grown a heavy fleece from a brush pasture. She was fed some grain when the lambs were quite small

Thrift and a Future

Dairying Brings New Hope to Discouraged Community

By B. K. BAGHDIGIAN

HAT the entire outlook of a farm community

HAT the entire outlook of a farm community can be improved in a comparatively short time has been proved conclusively in Pottawatomie County, Kansas. A threefold program, drafted four years ago to develop a neighborhood in this county, has resulted in the establishment of a successful dairy industry, a community church, and a rural high school.

When the Pottawatomie county seat was transferred from Louisville to Westmorland, with it went the spirit of thrift and progress, but the post-office and a general store remained with those who refused to abandon their homesteads. The inhabitants of the little inland village fell to two hundred and thirty; its social life waned; its business came to a standstill—hundreds of teams passed through the town and went to the next place to trade; its real estate declined and practically no property was transferred; its churches, for lack of funds, without ministers. "I was impressed with the fact that the farms near Louisville were adapted for dairying, and it seemed wise to have the community specialize in this phase of farming," said Walter Burr, director of the rural service department at the Kansas State Agricultural College and the instigator of the movement. "The advantages of dairy-farming were many. In order to convince the people of its possi-

tages of dairy-farming were many. In

tages of dairy-farming were many. In order to convince the people of its possibilities an extension school was brought to them from the agricultural college."

During one of the school sessions the corn crop of the neighborhood was suffering from the drought. One of the speakers pointed out that the corn might have been saved had the farmers had silos. After the discussion of the silo a few of the farmers came together and talked over the points covered in the speech.

"It is too late to do anything this season," said one of them.

"Labor is short and one man can accomplish little," was the trite remark of another farmer.

"There are seven or eight of us right

"There are seven or eight of us right here," pointed out a third person. "Let's all help each other."

Then and there they formed a club and at once ordered the silos. When the material arrived everyone was ready to help put them up and later to fill them.

Meanwhile the extension school went on for two years. As a result the people

Meanwhile the extension school went on for two years. As a result the people saw their economic salvation ahead of them. With great zest they began to put into practice what they had learned.

Realizing the merits of high-grade live stock, and in order to economize in purchasing the stock required, a few farmers came together and discussed the best methods of buying what they wanted. It was decided to send one of their members, with an expert dairyman, to Wisconsin. They bought a carload of high-grade Holstein cows and a registered bull. The Louisville farm community is now on the map as a dairy center; four years ago it scarcely

map as a dairy center; four years ago it scarcely had a dairy cow.

Survey the Soils of the Farms

"THE possibility of the economic advancement of the community was tackled from another angle," declared Mr. Burr. "At the close of the first extension school the soil of the various farms was surveyed to determine the productive power and the extent of improvement needed. Following this, meetings were held by the surveyors on the respective farms to discuss effective methods of improvement of the fields.

"From that time on the farmers did not grope in the dark as to the probabilities and the possibilities of their lands. They knew what each piece of land was capable of producing. With little help they went ahead and planned intelligently for crop rotation, for gradual improvement of the fields, and for raising feeds best suited for dairy cows."

Another result of the extension school has been the canning of fruits-and vegetables by the local families. At one of the public meetings the question of building cement walks was debated. A group of men opposed any such improvement. These people eventually had a change of mind and took the matter out of the hand of the originators, and in spite built more walks than was contemplated-perhaps to show that they could run things as well as others.

To Mr. Burr all these improvements seemed to be temporary unless he could inspire the people to greater accomplishments. Throughout centuries

churches have been practically the only source of inspiration, but he could expect very little from the local churches, which were at odds with each other. He then launched a constructive gospel which connected the spiritual life of the neighborhood with their everyday problems.

"From the pulpit of this community church is discussed every subject which deals with the welfare of the neighborhood," said Mr. Burr. "Nothing that brings comfort and greater sense of happiness to the people is tabooed in the Sunday or other meetings. On one Sunday the topic of the sermon may be religious; another Sunday it may deal with economic, educational, or social problems; or still another time a concert may be given by the young people of the church.

"The church also furnishes a meeting place for the social life of the neighborhood. The people gather there for choral and pageant practice, community



Four years ago there was scarcely a dairy cow in the township. Now it has herds like this

band rehearsals, socials and entertainments. In one case the school children were offered prizes to write the story of pioneer life at Louisville. Later these stories were put together and made into a play which was acted by the local people. Traditional songs, legends, and the history of the Indians were revived and are a great source of enjoyment."

and are a great source of enjoyment."

The educational improvement at Louisville came as the natural result of better economic conditions. As survey of the earning power of the typical farms had shown that the wage income of the average farmer was less than that which the government census declared a living wage for a laboring man. Better agricultural conditions, however, had increased the income of the community. Most of the people then were ready for the rural high school. Again the opposition class tried to have its own way.

On the eve of the opening of the school three mem-

On the eve of the opening of the school three members of the community took out an injunction in order not to allow the use of the district school for high-school purposes. According to the law, if the high school was not in session within a certain length of time at the beginning of the school year it auto-

matically ceased to exist. Mr. Burr sent a big tent from the agricultural college and the rural high school started under it. For two days the pupils had

their lessons under the tent.

Then, finally, the school was moved into the community church and the parsonage. One room was fitted for a domestic science laboratory, and another for manual training and printing. The students will publish a paper which will be devoted to their own interests as well as a the interest of the will form interests as well as to the interests of the whole farm community. The church grounds will be used for experiments in gardening and orcharding.

The Louisville community is noted for its good homes, its progressive community church, its up-to-date rural high school, and the general thrift of its people.

Trapping Muskrats

By GEORGE J. THIESSEN

other fur-bearing animals put together. Every season there is a small army after this animal, and despite the fact that hundreds of thousands of skins are taken they do not seem to diminish. The muskrat is the only one of the smaller animals which feeds entirely upon vegetables. Some claim that it will eat flesh, but in my experience I have never been able to prove this claim.

Many think that there are two distinct

Many think that there are two distinct species, but this is not true. One will usually find houses in lakes, ponds, and shallow streams with scarcely no current. On the other hand, the rats also build

along swift water.

The simplest method of taking the muskrat is by placing traps at the foot of slides. It is best to make the sets in about three or four inches of water so that the fur bearing are taken by the

slides. It is best to make the sets in about three or four inches of water so that the fur bearers are taken by the long, strong hind legs rather than the weak and short front ones. When caught by the latter they invariably escape.

I might also say that for this little fur bearer—and professional trappers will agree with me—I prefer the No. 0 trap, for the reason that it is strong enough to hold the animals and rarely, if ever, will break the leg bones. It is best to stake all sets in deep water. The muskrat will attempt to dive when caught, and will seldom be able to reach shore if the water is more than about a foot deep.

When trapping in deep water—that is, when the entrance of the house or den is situated in such a way that it is impossible to make an ordinary set—incline a board at an angle of 35 degrees, sticking one end in the mud and supporting the other with stakes. Just below the surface of the water arrange two nails so as to hold a trap. On the part of the board extending out of the water arrange some decoy. The animals in climbing the board will encounter the trap and get caught if the set is made properly.

Stake a numpkin or head of cabbage in shallow

set is made properly

set is made properly.

Stake a pumpkin or head of cabbage in shallow water, surrounding it with several traps. Often several fur bearers may be taken in a single evening with a set of this kind.

On inclined sticks, about eight or ten inches from the surface of the water, place some corn, apples, or parsnips. Under these arrange sets.

When the first ice commences to form along the edges of the water, and is thick enough to hold the muskrat, the slides may be kept open by placing at each one a bag of coarse salt. Arrange the trap on the top of this.

Often, between small ponds, shallow canals which the animals use may be located. At the entrance of these are ideal places for sets. Around springs and large drains, traps may be placed during the colder months. It is not necessary to employ any bait. Some trappers spear rats. Skins of these do not bring within three or four

cents of what perfect ones do. Pelts which have been shot invariably bring low prices also, as do those which are stretched by the Indian method. This was the old way of curing the skins, and by doing it the pelt hunters save themselves considerable labor. selves considerable labor. The trapper simply uses a small bent twig, forming it into a bow and placing it in the fur. Of course this means skins of many shapes, imperfectly stretched, and as a result they are undesirable for the manufacturer.

The muskrat does not become prime until late winter or late spring. How-ever, most of the hides are taken in the fall, due to the fact that the animals are very active storing up food and preparing their winter quarters. In cold weather they do not venture out of their dens to any extent.

The general predictions for all kinds of muskrats, this year, is that they will bring very high prices, and one can well afford to spend his time after this small animal.

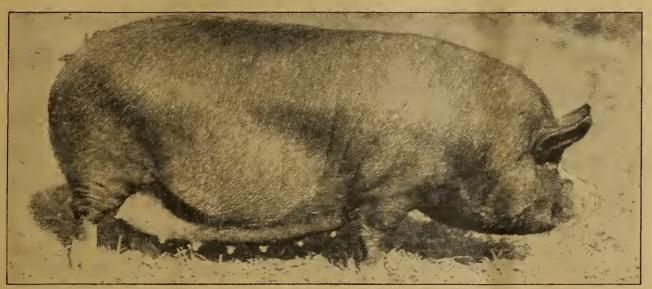


With renewed prosperity comes a social life with entertainments and pageants. The young people are contented and loyal to their home town

Care of Brood Sows

Feeding Schedule That Brings Strong, Healthy Litters

By W. C. McCORMICK



A good brood sow is indicated by deep sides, long body, good heart girth, strong legs with good feet and pasterns

SUBJECT pertaining to hog-raising has been discussed more thoroughly or by more competent authority than the proper care of the brood sow. I have read many articles written by some of the best swine raisers in the country, and from each of these articles I have been able to pick out many good points and suggest been able to pick out many good points and sugges-

The points which I was able to apply to my own herd I gave a good trial, and ones which proved good I have kept. After trying one suggestion from one article and another from some other, I was able to lay out a plan which works out to the best of satisfaction here in Idaho.

lay out a plan which works out to the best of satisfaction here in Idaho.

The trouble I found with the very best plans was that they were worked out under conditions which do not exist here in this locality. Especially was this true in the use of the balanced ration. The main body of each of these rations consisted of corn. We of northern Idaho must seek a substitute for this part of the ration. As soon as I began working out a balanced ration for brood sows I commenced experimenting with different grains raised here in this section of the State.

The wheat bran can be secured at any flour mill:

The wheat bran can be secured at any flour mill; The wheat bran can be secured at any flour mill; the tankage used was purchased in North Portland, Oregon, and contains 60 per cent protein; the grains used were raised on our land, and are common in all the Northwestern States. The balanced ration shown can be worked up in any of the Northwestern States, and if followed will produce results equal to those attained by the use of corn as the body of the ration. A breeding record is kept for each sow, showing date sow was last served and date when due to farrow. Seven days before the date due to farrow the sow is placed in an individual farrowing pen. This pen or lot is 25x75 feet, fenced with 32-inch wovenwire hog fencing, and consists of a clover and timothy

wire hog fencing, and consists of a clover and timothy meadow with running water through one end. In one end of each of these lots is placed a portable hog house. These houses are built on skids and are moved from one lot to another, enabling us always to have green pasture in the lot without the expense of

have green pasture in the lot without the expense of building a permanent house in each lot.

When the sow is placed in the lot, the balanced ration is fed to her and continued to the third week after farrowing, at which time she is placed in a larger pasture with other sows having litters of about the same age. You will note that the ration shown is made up of milk-producing ingredients prior to farrowing date, and gradually cut down to nothing at farrowing time. Starting again twenty-four hours after farrowing, it gradually gets up to a full ration at the end of three weeks. By following this table we have never lost a pig from scours or any other stomach trouble and by feeding the sow in the opposite end of the lot from the house we succeed in getting the little fellows out in the sunshine the day following farrowing. This teaches them to get the sunshine and exercise necessary for the prevention of thumps. Out of 59 pigs farrowed during the month of March we have not lost a single one from thumps, scours, or any disease common to young pigs. thumps, scours, or any disease common to young pigs. We attribute our success to proper feeding of the sow before and after farrowing and the few hours' attention given the litter at farrowing time.

Pasture Plays an Important Part

WHEN the pigs are about three weeks old the sow Which the pigs are about three weeks old the sow and litter are moved into pastures containing about three acres. We place from three to seven sows and litters of about the same age in one pasture, fig-uring about 35 pigs to a pasture, as our creeps are built to handle this number of pigs. Shelters of poles covered with straw are built in each of these pastures for shade in summer and protection during freety

covered with straw are built in each of these pastures for shade in summer and protection during frosty nights. Creeps are also built of poles, and each creep contains troughs with three-inch sides, figuring enough troughs to care for 35 pigs.

As soon as the sows and litters are turned into these pastures the pigs begin to eat, and a ration composed of 50 parts ground oats, 20 parts wheat bran, 15 parts ground barley, 14 parts ground wheat, and 1 part tankage, containing 60 per cent protein, is fed to them soaked in sour skim milk. I feed as much as they will clean up twice daily. This ration, together EW

with the mother's milk and pasture, produces pigs weighing 70 pounds or better, at ten weeks of age. This is the age at which we wean all pigs

From the time the sows are placed in the larger pasture until the pigs are weaned they are fed the same ration, with no increase, as shown at the end of

BROOD-SOW RATION FOR EACH 100 POUNDS OF

Days	Pounds	Pounds of	Pounds	Pounds
before	of _	tankage	of	of
and after	ground	60 %	wheat	skim
farrowing	feed	protein	bran	milk
7	1.2	.0	.0	.0
6	1.0	.0	.1	.0
5	.7	.0	.2	0
4	.5	.0	.3	.0
$\frac{4}{3}$.2	.0	.4	.0
2	.0	.0	.5	.0
1	- :.0	.0	.0	.0
Farr'ing da	ay .0	.0 .	.0	.0
1	.0	.0	.0	.0
2 3 4 5 6 7 8 9	.0	.0	.1	.2
3	.0	.0	.1	.4
4	.0	.0	.2	.6
5	.0	.0	.2	.8
6	.0	.0	.3	1.0
7	.1	.0	.3	1.2
8	.1	.0	.3	1.4
9	.1	.0	.3	1.6
10	.2	.0	.3	1.8
11	.4	.0	.3	2.0
12 '	.5	.0	.3	2.0
13	.6	.1	.3	2.0
14	.7	.1	.3	2.0
15	.8	.1	.3	2.0
16	.9	.1	.3	2.0
17	1.0	.1	.3	2.0
18	1.1	.1	.1 .2 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3	2.0
19	1.2	1 1 .1	.3	2.0
$\begin{array}{c} 20 \\ 21 \end{array}$	$\frac{1.3}{1.4}$	1	.3	2.0

ound feed is made of 50 parts barley, 40 parts oats, 10 parts wheat, all ground together fine

three weeks. Should the sows be bred for another litter that year, we place them in a pasture by themselves and feed them a heavier ration, consisting of ground barley and wheat, for a period of a week or so, or until they begin gaining in weight. As soon as this gain is noticed they are bred during the first heat thereafter. Should we not wish to breed them for another litter that year, we turn them in a lot with other dry sows and they get pasture alone. As soon as a sow is bred she is turned in with other bred sows and dry sows until taken up again for farrowing. The older sows are allowed to farrow twice a year, the gilts being allowed only one litter. No gilts are bred to farrow before they are a year old.

When the pigs are weaned we pick out our brood sows and boars which we wish to keep for breeding purposes, choosing nothing but the very best. They must come up to a high standard of excellency before being reserved. The culls are ear-marked by cutting out a notch in the ear. The boars are castrated, and the ones reserved for the herd are marked with metal ear tags stamped with numbers and our initials. All

ear tags stamped with numbers and our initials. All of them are allowed to remain in the same pasture until they are four months of age, at which time we separate them, placing the stock hogs in one pasture and the ones reserved for breeding in another.

In choosing our brood sows we pick gilts with deep sides, well-sprung ribs, long bodies, good heart girth, standing on strong legs with good feet and pasterns. The size of the litter from which they came is given but little thought, as some of our best brood sows are out of small litters. They must have all the points above mentioned or are placed among the culls. We keep our brood sows as long as they prove good breeders and mothers, regardless of age. When a sow does not come up to what is expected of her, she is immediately sold is immediately sold.

As soon as the gilts are chosen for brood sows they are placed together and fed a growing ration, consisting of ground oats with a very small percentage of ground barley; no wheat is fed at all. We have bred yearling gilts weighing 300 pounds in flesh.

For spring litters we never breed earlier than November 6th nor later than December 15th. This gives us a chance to breed back for a fall litter and have our second litter come early enough to get a start with the pigs before green stuff is gone and cold weather has set in.

weather has set in.

Our brood sows are all wintered on second-cutting alfalfa hay fed in racks, the sows with litters at side get this alfalfa hay in addition to the balanced ration, but the dry sows receive no grain at all, and come out in the spring in ideal breeding condition.

Western Rice Soils

By ARTHUR L. DAHL

HE remarkable development of the rice industry in California has naturally raised the question:
"What are the requirements for rice culture?"
The answer is: First, the land must be level enough to hold water; second, the surface soil must be underlain by a subsoil impervious to water; third, there must be ample fresh water to keep the growing crop flooded; and fourth, the climate must be warm enough

to mature the crop.

All of these conditions are found together in the Sacramento Valley, in California. There the largest part of the rice crop is grown in black adobe soil, which contains about 50 per cent of clay. In structure it is very close and compact, and when wet is as tenacious as putty. The subsoil, which lies at a depth of about three feet, is gray in color and is impervious

to water.

In Colusa County another type of soil suitable for rice-growing is found. It is composed of silt loam, and is of a light brown color. It is of alluvial origin and varies in depth from 18 inches to 6 feet. It is easily cultivated, though some of the heavier types of this soil have a tendency to form large clods.

In the Willows District the soil is of a reddish and yellowish brown clay that is compact, tenacious, and impervious. It puddles badly, and bakes upon exposure to the sun. It is not easy to cultivate, and contains a small percentage of alkali, which, however, is not injurious to rice.

Rice has also been grown successfully on the Alamo

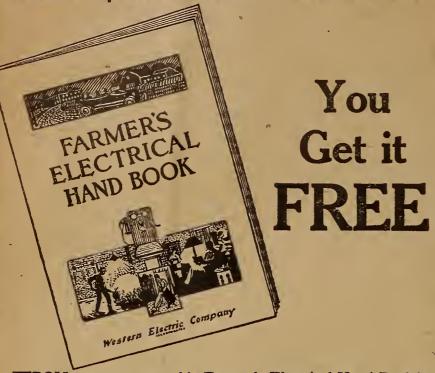
Rice has also been grown successfully on the Alamo clay-loam adobe lands of California. This soil is both sedimentary and alluvial in formation and lies upon a red hardpan.

One advantage the California rice grower has over the Southern grower is the long dry season when no rains occur. If he has planted early enough, he is assured of perfect harvest weather.



California's black adobe soil, so excellent for rice-growing, looks like this when dry. When wet it has the appearance and texture of black putty

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The Editor's Letter

A Pioneer Has Been Doing Some Thinking



HEN the gnarled, calloused hand of a farmer grasps the smooth,

soft hand of a banker, for instance, an impression is made in both minds. The owner of the calloused hand is conscious of the physical weakness of the soft hand. The owner of the soft hand, irrespective of his wealth or posi-tion, instinctively respects the strength of the other. There is naturally a pride in the possession of physical strength, but I seriously question whether this pride is as justifiable as we sometimes make it, considering this day and gen-

Haven't we made a fetish of the capacity of the human body to stand hard knocks? I sometimes think we take unwarranted pride in horny hands and knotted muscles as proof of hard and useful work, and later on of our right, when prematurely broken down, to be cared for as semi-invalids by our chil-dren. This matter is brought up by Mr. A. T. Anderson, who gets his FARM AND FIRESIDE up in Minnesota. In his locality farms must be carved out of wild timber land.

timber land.

A few weeks ago Mr. Anderson asked for the address of Mr. G. T. Wyckoff, who had an article in FARM AND FIRE-SIDE telling how he cleared his farm in northern Wisconsin by means of a tractor and grub breaker. We sent him the information he wanted, and now Mr. Anderson comes back with a most thoughtful letter.

"I thank you for Mr. Wyckoff's address," he writes, "also for your offer to assist me in other ways. The right way to build farms out of the millions of acres of wild timber lands is the problem I am trying to solve.

problem I am trying to solve.

"The idea of distributing this labor and expense on several generations before the work is accomplished is a very slow and wasteful way. And besides that, a lot of this land will be idle for a generation or more, waiting for a buyer and eating up more and higher taxes each year because there is no one to do the clearing and breaking act like Mr. Wyckoff has done on his land.

VOW, I am considering the advisability of starting a land-clearing and land-breaking company to contract for this kind of work and transform the wild stump and timber land to a condi-tion ready for seeding, so that a man who can raise the money for the job can get it done right and quickly and at a reasonable price and save his own back in the hargain

in the bargain.

"Now, any of the old ways with horses and teamsters and stump pullers are tedious and slow, and men soon tire of the job. Farmers themselves grow discouraged at it, and with gray hairs on their heads go to the grave and still have an uncleared farm left. The first plowing of the new land is also very

difficult, and dreaded by men and teams.
"If what Mr. Wyckoff said in your
paper is true, that is the way I would
want to try it. One machine instead of 12 horses, three men instead of ten to handle the power and chains would sim-plify the work. Team work is worth \$6 a day here, and men are hard to get for any kind of work, to say nothing of



hard work like

He then asks some questions about suitable tractors and plows, which have

been answered with the warning that for big stumps he must still expect to use stump pullers or explosives or a combination of the two. In editing a paper like FARM AND FIRESIDE we some-times wonder how much of its news matter and the ideas contained are actually made use of in a practical way. We were a little afraid that the talks on rural credits and the farm-loan act might be tiresome. But friend Anderson, anyhow, has been interested, for he asks: "Can federal farm loans be made use of for improvements such as this land-clearing work? Can you assist me in getting the official facts? You will make FARM AND FIRESIDE a still greater paper by starting a land-clearing move-ment."

THE trouble with a lot of agricultural writing is, it isn't practical, there is too much about new and untried theories, and too few sound facts about plowing and feeding pigs. But going back to the land-clearing and farm-loan proposition, it sounds like a mighty good idea. Clearing lands and making them productive is a permanent improvement, good for the farmer and good for the country. It ideally represents the kind of work for which federal help has been promised. We have answered Mr. Anderson's letter, telling him most of the things he wanted to know. Whether his proposed land-clearing company will work out successfully depends of course on his individual enterprise, amount of HE trouble with a lot of agricultural on his individual enterprise, amount of work he could get to do, labor conditions, and other problems which will have to be met as they come up.

But the idea is along the right lines. If the Government has seen fit by means of reclamation projects to open up millions of new acres on the desert for settlement, why cannot some wholesale method be worked out for carving farms out of the forests and stump lands by means of power machinery instead of primitive back-breaking methods.

A business man does not build his factories with his own hands, laying a few bricks at a time and trying to get an income at the same time. But that is just what the old method of clearing land and farming among stumps amounts to. Besides, have we a moral right prematurely to wear out our own bodies and those of our families doing work that is more appropriate for powerful machinery than for human flesh and blood? As this is written, 871 subscribers of FARM AND FIRESIDE have filled out and sent in the coupons asking for particulars about methods of securfactories with his own hands, laying a for particulars about methods of securing money under the Federal Farm Loan Act. We hope that a good proportion of these prospective borrowers will use the money for land-improvement purposes, so they can look forward to many years of good crops on clear acres, not simply to the distant day when with mattock and spade they will grub out the last stump.

The Editor

\$175 in Prizes for the Best Letters

THE Editor of FARM AND FIRESIDE will give 47 prizes, amounting to \$175, as awards for the best answers in a letter contest to be announced in the next issue—the December 16th

You remember some of our other contests: What's She Telling Teacher? My Narrowest Escape; How I Break a Broody Hen; How I Got Out of My Rut; My Best Investment; and Our Fire.

The contest to be announced in the next issue, and which, by the way, will be open only to paid-in-advance subscribers of FARM AND FIRESIDE or members of their families, will differ from our other contests in the size and number of prizes offered.

The Editor is giving \$50 for the best letter or answer entered in the contest. The second best will win \$25, the third best \$15, the fourth \$10, fifth \$5, sixth \$5, seventh \$5, eighth \$3, ninth \$3, tenth \$3, eleventh \$3, and twelfth \$3.

The thirteenth best letter will win \$2, fourteenth \$2, fifteenth \$2, sixteenth \$2, seventeenth \$2, eighteenth \$2, nineteenth \$2, twentieth \$2, twenty-first \$2, twenty-second \$2, and twenty-third to forty-seventh \$1

Full particulars will be given in the next number—the December 16th issue of FARM AND FIRESIDE. Be on the lookout for the announcement of the contest.

Turkey and stuffing and mince pie and frosted cake were all they wanted in Big Bowl-and they got them

Kidnapping a Cook

A Tale of Christmas in a Montana Cow Camp

By MARION SHERRARD

Illustrations by A. B. Frost

HERE was a smell of burning leather. Frizzly Freddy hastily withdrew his feet from the bunkhouse stove

"Gosh darn it, that burnt clean through!"
"Well, what do you expect?" inquired Blizzard
Babe, shutting off the draft. "Ain't the blamed thing

"Oh, my coffee tastes like glue-oo,
And my bread I cannot chew-oo,
And my beefsteak, I have burnt it to
a coal.
So if I love my li-i-ife, I must get
myself a wi-i-ife
For my little old log cabin in Big Bowl."

"Let's jug that nonsense," suggested Blizzard, "and try to start our sense to building some way to merry-up old Christman"

Christmas." Compressed silence within the bunkhouse. Each cow-puncher whittled the sole of his boot with his jack-knife, a sign of deep meditation.

OUTSIDE, the blizzard rushed madly around the cabin, laughing and shouting hilariously, squeezing gay little puffs of wind through the cracks in the daubing. The snow saucily spanked the window pane and tried to dislodge the old pair of overalls that shuddered in a broken glass. The smoked-up that shuddered in a broken glass. The smoked-up lantern sent forth a bleary half-light that illuminated the thoughtful contortions on the faces of the cowpunchers and sent queer, clumsy shadows squirming

Bachy closed his knife with a snap.

"Say, boys, we might all ride sixty miles down to Slurlump and see the train go by. I ain't seen no

train for two years."

"Yes, or we might could all stay home and play paper dolls," derided Toothpicks.

"Well,"—and Blizzard got up and stretched with an air of finality—"you snickers might just as well shut up about goin' off. It's a cinch we've got to stay here—right here, dinner or no dinner, merry or no merry. We've got four hundred and fifty head of beefs here to be fed, and they'll be worth about thirty-five thousand next spring—a little sum that

we can't afford to lose.

"There sure ain't no rancher goin' to loan you his wife for to do your hashin'. You know they ain't no spare woman at Blizzard's Roost, and Big Breezes

ain't nothin' but ranchers and a schoolhouse."
"Well, I've got to have either a good feed or a good

drunk this Christmas," grumbled Gloomy Gilbert. "My insides is jest fidgetin' for grub with some buck to it. In a slow old hole like this, meals is the only excitement anyhow, and burnt bacon and soggy spuds for Christmas dinner! Now, say, ain't that beyond human suffering?"

"OH, YOU had oughter seen the mince pies my ma used to bake for Christmas! They had puffy-fluffy crusts, all brown and slick, decorated with lovely holes in rows. Oh! us kids would jist stand around for hours and hours and just hurt inside for them pies, and stick our fingers through the holes when no-



Suddenly a horseman appeared in the yard and rode right up to the door. He wore shaggy wolf chaps and a six-shooter

body weren't a-lookin'.

body weren't a-lookin'. And when we did git at them—sick, gee-ee—and happy and full—gee!"

Sorrel put his head in his hands. A gloomy wistfulness filled the eyes of all the sturdy cow-punchers as they gazed at the red between as they gazed at the red-hot stove and looked back into the happy Christmases of their youthful days.

"Oh, I reckon my ma was the best cook in the world," broke in Curly. "That stuffed turkey, that—"
"Aw—why don't you fellows jug that dope?" Blizzard's wavering voice struggled to be stern. "Ain't they enough gloominess a-floppin' around here without you a-startin' us on them spicy remembrances? Now I reckon my ma-

Thump! It was Frizzly's three-legged chair coming down. He had been rocking back and forth. the force of an inspiration, he jumped up and hopped into the air, knocking over two cow-punchers and sending the dogs howling to the shelter of the bunks. He bounded over the stove and landed right in the middle of Curly's game of solitaire. "Oh, fellows, oh, jiggers, I got one! I know the real one! I knew there was somebody. She's the little schoolmarm at Big Breezes. She's got a whole week vacation, and they say that she can roast meat like old Satan his-

"Darn!" muttered Toothpicks. "One fool idea."
"Oh, grab me quick!" Blizzard sprawled over the back of his chair. Though used to high-handed deeds, the idea to him was unthinkable. "Can't I jest see

old Friz a-goin' up to her and a-sayin', 'Please to come home with me and cook—'"
"Me!" Frizzly jumped up, alarmed. "I ain't no lady-fetcher. Bronchos is my line. I didn't mean me—some of you other fellows—"
"Oh you're angle lind now." Toothride account.

"Oh, you're awful kind now," Toothpicks assured

him. "I'd about as leave lie down in a bunch of stampeding cattle."

"It's only in them fool magazines that cowboys gits on joshing terms with a schoolmarm," Gloomy nodded

wisely.

"I ain't even got the nerve to look at her footprints,"—sentimentally from Slushy.

"No, my dear old Friz, unruly horses ain't unruly women. We're all broncho-busters and darned cowards when it comes to the smushy sex. But what's the matter with Big Buckskin? Ain't you got no idea in your hollow?"

The big red Irishman was a new addition to the

The big red Irishman was a new addition to the Sour Dough camp. He had become the ruling intellect; he figured the hay and devised the punishments. Never, so far, had his "hollow" proved inadequate.

Now he pushed the hat on the back of his head and folded his arms, while his eyes soared toward the seiling; his mouth began to wiggle and twist, his head jerked back and forth like a mechanical toy. Finally he began to make hot little sputtering sounds, something like "Brunt, brunt, fizz-is," always the sign of an approaching idea. The cow-punchers fidgeted with anticipation. "Brunt, brunt, fizz-is." Then the contortions ceased and a lofty, inspired expression overspread his great red face as he stated heavily: "Me fr'inds, if that thar schoolmarm cook be the only unattached appendix in this valley, I say we've got to fetch her. Now, I'd suggest that we bring in the washtub and fill it full of cold water. Ivery b'y of you ducks his head in, one at a toime, and the one what comes up foist, he goes after the schoolmarm. Whoiver Providence sees fit to thusly pick out will have to make up his own plans out of his own head, pick out will have to make up his own plans out of his own head, whether he will coax her, scare her, or kidnap her."

FINE! Humdinger! The real stuff," approved the cow-

Humdinger! The real stuff," approved the cowpunchers.

"Suits me," declared old Toothpicks. "I'll drown till I'm dead before I'll make a fool out of myself."

"If anyone is so foolish as to kill himself for spite like that, we'll make him go without a bite of Christmas dinner," announced Buckskin sternly.

But the enthsuiastic cow-punchers had rushed into the thickening blizzard and were kicking around in the snow in search of the "fambly" laundry, as they called it. Finally Slushy yelled through the storm that he had left it down at the corral, having used it there to water the horses. After much floundering and kicking in that vicinity, Bachy's foot hit somethat gave forth the true washtub ring. They dug it up, dumped out as much snow as would come, and started for the greek. Here they broke the ice in the

up, dumped out as much snow as would come, and started for the creek. Here they broke the ice in the water hole, and, filling the tub to the brim, bore it triumphantly to the bunkhouse. When they gazed at the pieces of jagged ice that zigzagged around in the middle and tinkled against the sides, they shivered: it was a bitter cold night.

"I believe I'd rather wait until some of you hot-heads has warmed it a little," Frizzly decided. But Blizzard smiled his conqueror's smile: "Watch

me! I just hope I won't butt my brains out against them there icebergs." Splash! He came up choking and sputtering, his white hair and eyebrows stream-

ing ridiculously.
"Five seconds!" yelled Buckskin, the timekeeper.
They chalked a big "5" on the back of Blizzard's

blue flannel shirt.
"I'm next," announced Gloomy, "and I sure ain't hankering after no such head bath." He pulled his hat down over his ears, shuddered, and ducked. "Seven seconds!"

Buckskin decided to end his suspense, and handed the watch to Blizzard. Bravely he took off his hat and started going down by inches.

"It don't count till you're in to the neck," announced Blizzard; but just then Buckskin lost his balance and fell all the way in. He strangled and kicked the tub all out of shape, and was finally helped

out by two of the boys.

"A foul!" called Blizzard. "It ain't no fair mutilating the fambly laundry. Try again." Brave Buckskin, dripping and shivering all over, tried again, and got a big "14" on his back. Curly came next. They chalked him up "8." [CONTINUED ON PAGE 22]

HARM TIRESIDE

THE NATIONAL FARM PAPER

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December 2, 1916

Safe and Sane Farming

THE short road to success is constantly sought. A promising new crop, a novel method of feeding stock, a specialized line of farming-any of these and many more look like the beginning of the short road. We are many times sorely tempted to try it while our plodding neighbors are going along in the customary beaten path.

We read or are told of some farmer who has given up dairying and has made a great success with melons. Another succeeds with flowers after barely making a living in raising hogs. An enthusiastic turkey raiser will advise all who will listen to him to drop chickens and raise turkeys. Plow up your clover and get rich raising peanuts. Sell your old reliable quarter section of corn land and buy ten acres of bearing orchard. The dangerous part of such advice lies in the rare cases of success.

A few have actually profited by such changes, perhaps through chance or special personal fitness or local conditions, but in many cases some unusual factor has been left out of the story.

Odious comparisons between types of farming, crops, and breeds of live stock mark the impulsive though well-meaning enthusiast. Standard crops have always formed the basis for safe and sane farming—the kind that buys better homes, automobiles, and the substantial comforts in our later years. Leave the experimenting to the experiment stations and raise the products which are always in demand. In the end that is the shortest road.

Grandfather to Grandson

production show that our grandfathers had to work a full nine-hour day to produce two bushels of corn. In many cases it required another full day to carry a two-bushel bag of that corn on horseback to a distant mill to be ground profit for the railroad companies. into meal from which were made corn meal, johnny-cake, hoecake or corn pone, according to the locality.

To-day the grandson by the aid of THE liquor interests now realize that improved horsepower or motor-driven machinery can produce two bushels of will put still another crimp in the fetcorn in an hour and a half in so far as ters that are steadily limiting the the labor element is concerned. Put in activities of King Alcohol. another way, the grandson, by means of mechanical and cultural helps, can accomplish six times as much in a given period as did his grandfather sixty years ago in the work of feeding the world.

growing grandson receive six times as much for a year's planting, management, and labor as did his grandsire? If so, does he get it? Is his land investtimes greater, and do his living expenses, taxes, insurance, and upkeep of his farm plant call for a correspondingly greater outlay? Unless the grandson's receipts have kept pace with the increase of farm efficiency of his generation, thus enabling him to secure and and have a reasonable surplus of profit, voicing.

something is still out of joint in the farming business. Furthermore, even though the grandson may have become six times more efficient than his grandfather in the production of food supplies, unless he has advanced to where he can take his rightful place in the world's civic and social duties and enjoy an equitable share of its recreations, the grandson has still the most important made." of his accomplishments before himgetting these things.

"Velvet" for Railroads

WE ONLY need to hark back a few months to hear the ever-recurring refrain of hard luck coming strong from the railroads, telling of growing extheir operating ends meet. Of course the only way out of their ruinous predicament is rate-raising! Just now their time-worn refrain has temporarily died away, and here is the reason: The net earnings of all railroads in this country for the entire fiscal year was over \$300,000,000 greater than for the fiscal year ending in 1915. This, be it and methods.

Let Others Experiment

N AUTOMOBILE engineer offers A this bit of reasoning to prospective car owners, and also to those who contemplate buying accessories for the machines they now own: "Wait a year, till designs have become standard and at least the second models have been

Which means simply this: The first year of a new make of automobile or part or attachment is nearly always experimental. The idea embodied may be good and the mechanism may be a thorough success, but the developments of the first year nearly always suggest minor changes.

This counsel does not apply to minor penses and insufficient income to make changes in second or third year or later models, nor to standard equipment endorsed by general usage. It is simply a caution against snap judgment. And should the new puncture-proof tire or magic carbon remover that looks so good to-day be off the market in six months, you will pride yourself on your good judgment in sticking to standard goods

The Blue Envelope

ALL the eighteen years of her life, Leslie Brennan, orphan heiress, had had everything a girl could want. Then suddenly her guardian announced that her father's will compelled her to learn a real wage-earning occupation. What did she do? Just what you would expect of a plucky little Irish girl in the same situation-choked down her disappointment, swallowed her misgivings, and gallantly faced the music.

The story of her exciting career as a wage-earner is told in "The Blue Envelope," the first installment of which will appear in the next issue of Farm and Fireside. One of the largest moving-picture companies in the country has bought the film rights, and to illustrate the story Farm and Fireside has secured photographs of Lillian Walker as Leslie Brennan in the tensest moments in the play.



Lillian Walker as Leslie Brennan delivers the blue envelope

remembered, is net earnings, not gross earnings, in excess of the fiscal year preceding, as reported by no less an authority than "The Financial and Commercial Chronicle."

The net earnings for all the railroads of this country for the past fiscal year totaled the staggering sum of \$1,207,-632,001. The same high authority reports that never before in the history of our railroads has there been such large SOME figures recently worked out railroad earnings, both gross and net dealing with the economics of crop incomes, as during the present year. Even though railroading expenses are steadily advancing, shippers must be shown why a \$300,000,000 increase in net earnings will not take care of all advancing expenses and still leave a fat

Liquor's Last Stand

the ballot in the hands of women

To anticipate the coming of this new. force, the "Brewers' Journal" urges the separation of the beer and whisky interests in these words: "The franchise will be extended to all women in this country some day. There is little doubt Calculating the results of increased about that. Within a few years most efficiency on this basis, should the corn- of our large and industrially developing States will grant the vote to the opposite sex, and where will the brewing industry be then if it is still considered to be in alliance with the distillers and ment, farm equipment, and labor bill six whisky-selling saloons?" Hence. the effort of the brewing interests to get divorced from the distillers.

As the booze business gradually simmers down toward the vanishing point, these divisions within its camps may be expected to assist in the general extinction of liquor by just such internal disequip a farm for himself, pay expenses sension as the "Brewers' Journal" is

Our Letter Box

About Farm Girls

DEAR EDITOR: I say, "Good for Francis Albro, Oklahoma." He asks why nothing is written about keeping the girls on the farm. Now, I believe there is very little said about girls on the farm. And if farm life is good for boys why not for girls? I know there are many good ways of interesting girls on the farm. When I was a small girl I was always called on by father to help with all kinds of work. He gave me to understand that he needed my help and depended on me, and when there was a little runty pig it was handed over to me to feed and mother. If there was a lamb the mother sheep did not own, it was handed over to me. The same way with other apparently worthless little things. I fed them and cared for them, and they always lived so they were mine, and when they were sold the money was mine. As parents start out with children, that is the way they grow. I think every girl on the farm ought to have something of her own. Give her a little pig, a lamb, a calf, or a colt (always give baby things) as soon as the girl is big enough to feed and care for it. Put it where she will have the whole care of it, and let her raise it and increase, the father to furnish feed for a certain portion of the profits or the increase. She will grow up with an interest in the farm, besides giving her an education on buying and selling.
When a girl I bought a small pig with
some money I had earned, and my father let me have a horse and buggy to go and bring my wonderful purchase home. Wasn't I proud! In a few years both Father and I had lots of pigs, and I had wealth untold. Perhaps it would not seem such a fortune to-day, but I had such an interest then that I felt the farm could scarcely be run without my help. I married a man that was not a farmer, and I live in the city; can never get far away from the farm. bought an interest in a farm a few rears ago, a short distance out of town. own an auto which I drive myself. I run out to the farm every day, where there are cows, calves, pigs, and chick-ens galore. My advice is to give the

girls something of their very own and see if they don't take more interest and stay longer on the farm. I have not said one half I should like to say, but this may get into that awful basket as it is. Mrs. I. M. McIntosh, California.

So the Plow Scours

DEAR EDITOR: I have noticed that the first furrow plowed on a cold morning does not turn as well as the rest do. This is due to the moist dirt sticking to

the frosty plow.

To avoid this, the plow should be pulled out of the furrow at night and wiped clean and in the morning a little water will take all the frost out of it so that the first furrow will turn as well as the rest. KARL HOFFMAN, Vermont.

Clears Land with Dynamite

DEAR EDITOR: I cleared 15 acres of yellow pine stumps for \$80. There were about 300 stumps in the field, most of them were large old stumps cut perhaps twenty-five years, but sound. I bought 300 pounds of 40 per cent dynamite, which cost \$54; 400 caps cost \$4, seven hundred feet of fuse cost \$4.25. The labor cost \$17.

I set the charges deep in the taproot and blasted out the stumps with one shot, splitting most of them, the stumps being brittle. The fragments were gathered into piles and hauled to the lot.
The stumps too large to lift on the The stumps too large to lift on the wagon were rolled onto a sled tied to front axle of a wagon. The sled was held off the ground at the front end, throwing the load on the wheels of the wagon. All of the stumps and pieces were cleared off the field in two days. One half of the wood sold for \$70. It took ten days to blast and clear this field. R. F. VANN, South Carolina.

The Ozarks

DEAR EDITOR: The editor gave a good account of our Ozark country, fair and conservative. We have owned an Ozark home for seven years, and I am an enthusiastic booster for our country and climate. We are about 112 miles southeast of Springfield, Missouri. So our first objection is that home markets for fruit and wegetables, in the quantities farm folks like to market weekly or bi-weekly, are poor, being too far from a large city. Second, this is not a real corn country. Creek bottom land in good seasons produces fine corn, also some valley land, but not our average rocky slopes. Another objection is that the country is not sufficiently developed and improved, so schoolhouses are of home for seven years, and I am an enand improved, so schoolhouses are of such distance apart; it is a great incon-venience. And the same is true of country churches.

But having told, in justice to prospective homeseekers, the failings of our telling of its good points. Stock can winter by being fed three or four months, and some persons winter sheep with little or no feed except the short time when there is snow or sleet. Grasses and cane, millet, peas, clover, etc., do well here. The way to insure plenty of feed is to get plenty of these crops in early so they will mature be-

fore the midsummer drought. The dairy business is a most profitable industry here. You see, if you raise plenty of clover, millet, cane, and peas you can almost dispense with the corn crop except for feed for the horses

and mules.

Kafir corn is a great drought resister, and the seed is good feed for the chickens. And the fruit! Our climate is ideal for apples, peaches, grapes, blackberries, and strawberries. Blackberrie grow wild in great abundance. have so little snow that rye sown early in the fall affords green pasture for stock and chickens, lessening the feed

The people are generally sociable, more so than in richer countries. Personally we are for the Ozarks, first, last,

and always.
MRS. ANNE J. RICHART, Missouri.

When Buying Machinery

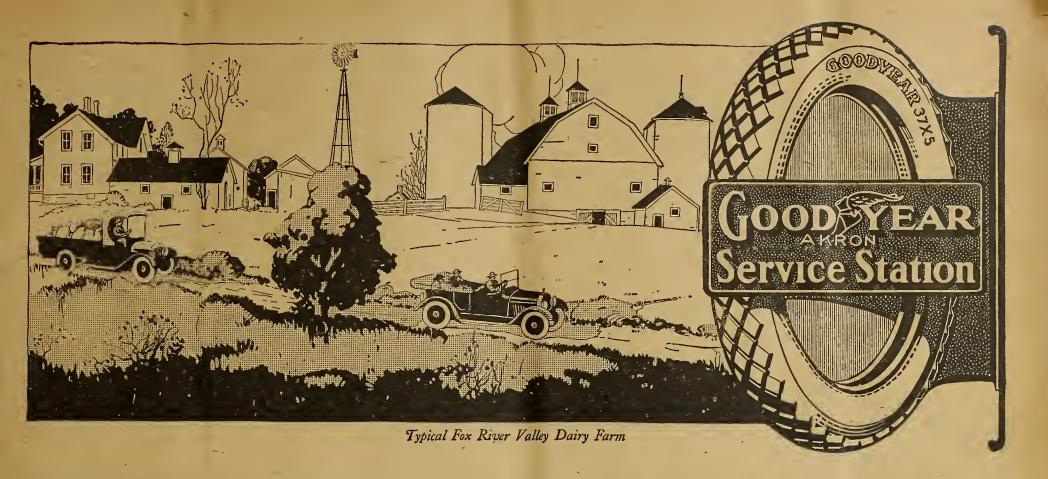
DEAR EDITOR: I notice in an article in FARM AND FIRESIDE, September 2d, mention of a 9-18 tractor on which I would be pleased to have further information. All the information you can mation. All the information you can give me regarding it will be thankfully received, for I am fully aware that if I buy a tractor without being informed it might not be what I want.

G. E. WITHERS, Texas.

Finds Farm Helps

DEAR EDITOR: I have been a reader of your paper for three years. As I raise pigeons and chickens, I find plenty of farm helps in it for anything I don't understand. I look for my book, and I like to hear the postman blow his whistle when it is time for my book.

GEORGE DIXSON, Tennessee.



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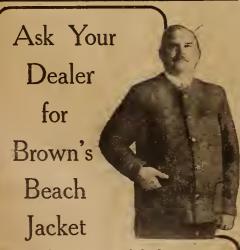
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Mass. Worcester

Grain Standards

Federal Corn Grades Easily Determined

By JUDSON C. WELLIVER



three cars of wheat as No. 2 red, paid the market price, and forwarded it to his terminal market point. It was re-jected, and he had to take a loss of 15 cents a bushel on one car, and 6 cents on two others. The noise he made could be heard clear across his State. He set off posthaste for Washington and told his troubles to the Office of Markets and the Grain Standards Bu-

"That wheat was entitled to grade," he protested. "I haven't been buying grain all my life without knowing it. Yet it was refused grade by a boy who looked twenty-three years old. I talked with him and found he didn't know with him, and found he didn't know anything about his business. What's more, I found that at that market they have been systematically treating grain this way because their warehouses are

this way because their warehouses are pretty full, shipping is scarce, and they are able to shave the country dealer enough to make a big profit, using these conditions as the excuse."

The Department could do nothing for him because its wheat standards have not yet been worked out. The dealer had to pocket his loss and go home. He has quit buying, and in the community where he operated others have quit, until it is hard to sell grain at all.

where he operated others have quit, until it is hard to sell grain at all.

Nobody could have guessed in advance that there would be particular need, right now, for an authoritative determination of wheat grades. The Department, in anticipation of the law's presence and under earlier legislation passage, and under earlier legislation directing it to do so, had prepared first its system of grades for corn. In ordinary times there has been more trouble over corn than wheat, so this seemed the right proceeding.

The standard wheat grades will be promulgated as soon as possible, but they will be too late to affect the marketing of this year's crop. Meanwhile, the Secretary of Agriculture has issued tentative regulations for the enforcement of the new standards and administration of the law. There is reason to believe that all the grains can be marketed under it next season.

THE official grades for corn may summarized as follows: There are six grades each for white and yellow alike save for the color. corn, exactly alike save for the color. Whether white or yellow, these are the specifications:

No. 1—Must be sweet; contain not over 14 per cent moisture; not over 2 per cent foreign matter and cracked corn; not over 2 per cent damaged corn; no heat-damaged or mahogany kernels; weight, not less than 55 pounds per bushel.

No. 2—Sweet; 15½ per cent moisture; 3 per cent foreign matter and cracked corn; 4 per cent damaged corn; no heat-damaged or mahogany kernels; weight, not less than

or mahogany kernels; weight, not less than

53 pounds.
No. 3—Sweet; 17½ per cent moisture; 4 per cent foreign matter and cracked corn;

per cent foreign matter and cracked corn; 6 per cent damaged corn; no heat-damaged or mahogany kernels.

No. 4—Sweet; 19½ per cent moisture; 5 per cent foreign matter and cracked corn; 8 per cent damaged corn, which may include not over ½ of 1 per cent of heat-damaged or mahogany kernels.

No. 5—Sweet; 21½ per cent moisture; 6 per cent foreign matter and cracked corn; 10 per cent damaged corn, which may include not over 1 per cent of heat-damaged or mahogany kernels.

No. 6—Shall contain not over 23 per cent moisture; 7 per cent foreign matter and cracked corn; 15 per cent damaged corn, which may include 3 per cent of heat-damaged and mahogany kernels; may be musty and sour; may include corn immature and badly blistered.

There is going to be no difficulty testing your own grain, if you want to. The Brown-Duvel moisture tester is the instrument used by the Government. Any boy can learn to use it in a little while, and it can be had as cheap as \$20. After determining the moisture content with it, the other elements can be determined by taking a sample and picking out and weighing the foreign matter, cracked and damaged corn. The whole proceeding is really easier than it

sounds, and it's going to be well worth while equip yourself to test your own grain. Every neighborhood club should have the necessary

needed right now, worse than ever be-instruments—the moisture tester and fore. An experienced buyer bought an absolutely accurate small scale.

It's going to pay to know after these grades become effective. The farmer can know just as certainly as his buyer. Then, when your grain is close on the margin between grades, you will be

able to protect yourself.

Your own grading will act as a check
on the buyer's grades, just as a set of good farm scales gives a reliable check on weights.

A GREAT number of letters have come to the Department of Agriculture, the Department of Justice, and other government offices, asking how the Clayton act affects farmers' efforts to

Undoubtedly the purpose in passing this act was to make it easier for farmers to do co-operative buying and marketing. The act was, indeed; much criticized on the ground that it made labor and farmers favored classes, privileged to do things that other classes of records were forbidden to do of people were forbidden to do.

But the actual effect of the Clayton act to this date has probably been to make farmers, at least, less certain than formerly what they may or may not do.

Section 6 of the Clayton act causes the trouble. In effect it provides that organizations of labor and of farmers having no capital stock, and not formed for profit, shall be exempted from the inhibitions of the Sherman act.

All this worries farmers who are trying to co-operate. It isn't always pos-

ing to co-operate. It isn't always possible to form co-operative societies without capital stock and do business.

Let me illustrate this point. The California Fruit Growers' Exchange does \$40,000,000 worth of business a year in marketing products. It has no capital and owns no property. Yet its banking credit in California is just about equal to that of the Santa Fé Railway, one of the greatest-systems in the world. In a community unused to co-operation it a community unused to co-operation it wouldn't have any credit.

wouldn't have any credit.

I know a city nearly as big as any inCalifornia in which a co-operative society of farmers applied to banks for
credit, and couldn't get any at all,
though the property of the members of
the society would probably have aggregated \$15,000,000. The bankers had
never seen co-operation at work and had
little confidence in the united faith of a little confidence in the united faith of a group of people who were not individually liable.

Again, the act says "not organized for profit." What does that mean? Of course it's organized for profit, direct or indirect; nobody would start it if there wasn't some profit in it. Every cent of the profit may be distributed ultimately among the members, but that It must pass through nt the oine. the association; and nobody knows what the Supreme, Court will finally say about that proceeding.

Up in Maine the potato growers co-operated in selling their product, and have done splendidly at it. They sorted and graded their potatoes, shipped only in carload lots, looked after collections protected themselves against fraud, and made money at it. One of these societies, the Aroostook Potato Shippers' Association, is charged with blacklisting bad customers: notifying its members not to ship to folks who had been "bad"

Whereupon the association was inconducting a conspiracy in restraint of trade, violative of the Sherman act. Haled into federal court at Boston, the association pleaded that it didn't know anything about any anti-trust act: it was a co-operative society of agricultural producers, specifically exempted from that act. And so it asked that the case be dismissed. dicted for maintaining a blacklist and

There is promise that this case will become famous. It raises many points that need determination, and will doubtless go to the Supreme Court. It ought to, and ought to be hurried along. The farmers are more alive to co-operation than ever before, but uncertain whether they have any rights, or what they are.



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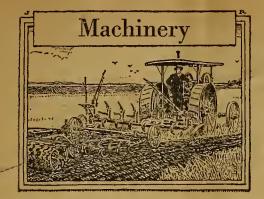
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Kansas Tractor Census

By Carlton Fisher

THE Kansas State Board of Agriculture has taken a tractor census, and announces these results up to March 1, 1916. Wichita County is the only one of 105 counties of the State which conains no farm tractors. Counties having the largest numbers are Pawnee with

113, Ford and Sedgwick with 108 each, Reno 107, and Barton 106.

Altogether there are 3,932 tractors in the State, an increase of 60 per cent over the previous year. They are most numerous in the wheat-growing counties, which are relatively free from stones and stumps.

Blasts Brick Walls

By Michael Speck

A NEIGHBOR of mine wanted to tear down an old brick house. Labor for such work is now almost unobtainable and he was in a hurry to have the house disposed of. I asked him why he didn't use dynamite and blast it down. He replied, "Because I want the bricks for new construction and do not want the lumber in the roof blown to pieces." I told him that that could be managed and still use dynamite on the

Although skeptical about this, he was practically forced to accept my views because he couldn't find anybody to tear the house down in any other way. Knowing that I had had experience in using dynamite, he employed me to do

the job.

With a pointed punch bar, I put down holes under the foundation five feet apart and three feet deep, loaded each hole with a half pound of sixty per cent strength dynamite. Each charge contained an electric blasting cap. After finishing the loading, I connected these charges up to a blasting-machine circuit and the firing was done electrically.

The blast caused the bricks to fall in a big heap. The roof simply sunk on top of the pile of bricks. Hardly a shingle in the roof was broken and it was found after cleaning up the bricks that not more than two hundred of them were broken. The owner admits that it would have been impossible to have torn down the wall by any other method and gave so large a proportion of the and save so large a proportion of the brick.

Systematic Overhauling By Bert McDowel

URING the winter I find that there are many stormy days when I can-not work in my woodlot, and then it is that I get after my farming implements and give each, from the worn binder down to the ax which is in need of a new helve, a thorough overhauling. On the reaper and mower I look for loose nuts, worn bearings, and clogged oil

On the cultivators I look to see if I am going to need new caps and, if so, order them. Then I look over the plows and order the number of new points which I am going to need. Thus I go through my list, and then when spring

comes around I am ready and do not have to lose valuable time hunting for a new point, a clevis, or some other part

which may come up missing.
But it was not always thus with me. Three years ago I was as careless and unsystematic a farmer as one would find, but I did not realize my own condition until I saw it in another. I was visiting a certain Western farmer and, as it happened, was there the morning he started in to harvest a large field of grain. When the binder was drawn out it was covered with dust and grit of a

it was covered with dust and grit of a year's accumulation.

Grain from the previous year's cutting still clung to various parts of the mechanism and the oil holes were filled with a mixture of dirt and grease which had hardened during the winter. With creaks and groans the machine started The driver was on his second trip around when the pitman nut came off,

around when the pitman nut came off, thus causing a delay.

Before noon a badly worn gear gave out, and the job had to be abandoned until a new part could be ordered from a near-by city. Under unfavorable weather conditions this delay would have meant a loss of many dollars in that crop of grain, but it so happened that Providence was kind and good weather prevailed.

As I stood watching all this, the

As I stood watching all this, the thought came to me what a careless method this friend was following in letting a whole winter pass and the rainy days of spring slip by in idleness and then come right up to the rush of and then come right up to the rush of harvest time and find that his binder needed repairing. But my friend's method was not more shiftless than my own, and I knew it. I resolved then and there to change my ways.

Tractor Hauls Manure

By Raymond Olney

ONE of the jobs for which I have found the tractor adapted, is haul-

ing manure.

For this work our equipment consisted of the tractor and two manure spreaders. We used spreaders of the largest capacity, and each was fitted with a

stub tongue.
With two men in the barnyard to load and one to drive the tractor we made quick work of manure-hauling. Our tractor had two forward speeds—2.6 and 4 miles an hour—and as the ground over which we were hauling was fairly smooth, I drove the engine at high speed

smooth, I drove the engine at high speed both to and from the fields, and also with the spreader in operation, without any injury whatever to the spreaders. One spreader, of course, was being loaded at the barnyard while the other was spreading a load in the field. The men at the yard loading were glad enough that the job was not very long. With the engine traveling at high speed With the engine traveling at high speed it seemed to them that it had hardly left the yard with a load before it was back again for another. It kept two men mighty busy, and there were practically no rest spells between loads.

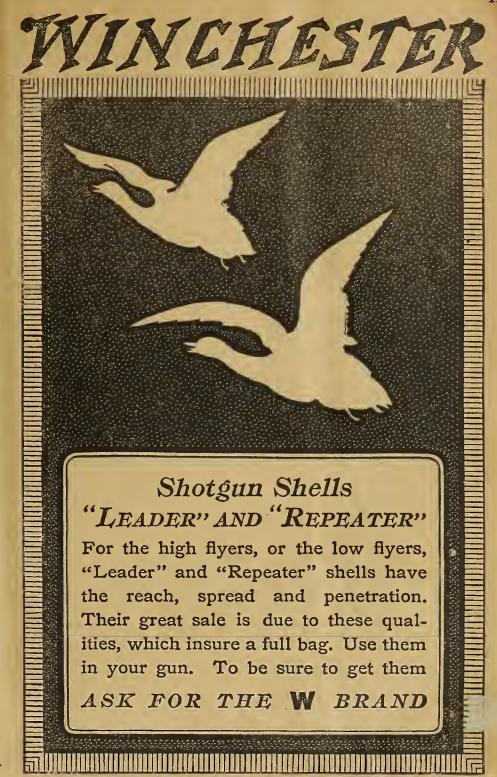
This was very quick work compared to the time it would have taken to do the same work with horses, as it would have taken much longer to make the

trip to and from the fields with a team.
There is a decided advantage in having the two spreaders, as it is not then ing the two spreaders, as it is not then necessary to stop the engine between loads if there is help enough available for loading, and the job is finished in double-quick order. But most farmers would, of course, not have enough manure to justify the investment in two spreaders; it is only the man who is forming on a fairly large scale that can farming on a fairly large scale that can afford such a luxury.

The one-manure-spreader farmer will have to stop his engine between loads. But tractor motors are improving all the time, and since they start more readily, as a usual thing, than they did four or five years ago, there is less and less trouble and delay from this source.

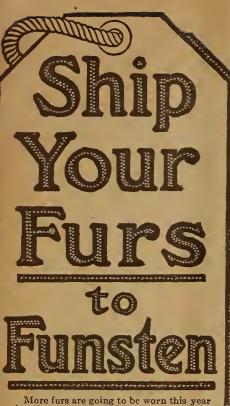


The motors are now so easily stopped and started that tractors are well adapted for intermittent jobs like manure-hauling





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Baume Test Unreliable

By B. D. Stockwell

THE desirability of some simple test for gasoline has been recognized by the U.S. Bureau of Standards, but thus the U. S. Bureau of Standards, but thus far the search for such a test has been in vain. "No such simple test," says the Bureau, "is known in the present state of the science of petroleum technology. In the early days of the petroleum industry, when all our gasolines, kerosenes, fuel oils, and lubricating oils were derived from one source, namely Pennsylvania crude petroleum, a simple measurement of the specific gravity, or Baumé number, by means of a hydrometer served as a fairly reliable indication of the qualities of these prodindication of the qualities of these products. To-day, however, the specific gravity test is practically worthless as a check on the suitability of a gasoline for a given motor equipment."

Experience the Best Safeguard

Among the reasons given by the Bureau are briefly these: Many new oil fields that have been opened up in recent years yield petroleums of different properties in no way related to the specific gravities. New methods of manufac-ture also complicate the problem. In the common opinion of gasoline users, a high-test gasoline will give more miles than one having a low Baumé reading. But this is not true if the motor equipment is adapted to the fuel used. gasoline of 70 degrees Baumé from some oil fields is no more volatile than a 65degree gasoline from other oil fields.

National legislation defining just what gasoline is and to what specifications it must conform is highly desirable, but at present there is no recognized basis on which to build regulations. The best course, therefore, for the gasoline user to follow is to get his "gas" where he knows it is clean, where past purchases have given satisfactory mileage per gallon, and where he secures full measure. The Baumé test is no longer a reliable index to follow.

Don't Skid

By W. V. Relma

ALL forms of skidding are due to some particular cause, and a review of such causes will enable the driver to avoid them. Tire chains and non-skid devices are desirable, but the best safeguard is careful and efficient driving. Oiled roads may cause skidding, especially if you strike them at a high pecially if you strike them at a high rate of speed. Keep to the center of the road, if possible, especially on a road

with a good crown.

Car tracks are very slippery when wet, and should be crossed as nearly at right angle as possible. Unless a car has large tires, avoid streets where

beast," he explained. He had several very narrow escapes, and after his most recent one he gave me a full description.

He said the car was not built right—was out of balance, weight wasn't distributed right. An examination, after

jacking up the rear wheels, revealed the fact that the brakes had a very uneven pressure upon the wheels, in fact the left brake would not hold at all. When this was remedied his unusual tendency to skid was cured.

When going upon a piece of slippery road the car speed should be reduced and all moves should be made gently. No sudden changes of direction or application of brakes should be tried. Any changes of direction should be smoothly made and a motor which runs evenly with a good smooth clutch will aid in

with a good smooth clutch will aid in preventing skidding.

In making a turn, the car speed should be reduced before reaching the turn so that the brakes will not have to be applied. The turn should be as slow and easy as possible. Short turns are likely to produce skidding. When the car starts to skid, release the brakes and turn the front wheels in the direction taken by the rear wheels. tion taken by the rear wheels.

When the front wheels skid, sometimes the application of the brakes will

Skidding is hard on tires, having a tendency to loosen the rubber from the fabric. Tire chains are almost a necessity for safe winter driving. Some good drivers use chains on all four

Lubrication Question

"I HAVE been told," writes a South Dakota reader, "that I should use a medium lubricating oil for my car in summer and a light oil in winter. Now I cannot understand why it should make any difference, because the engine runs very nearly as hot in winter as it does in summer."

Without knowing the make of car and the kind of oiling system used, a definite recommendation cannot be made in this case, but the advice to use a lighter oil in winter is correct in most cases. Cylinders receive their lubrication chiefly from some form of a splash system. While the temperature of the cylinder walls is about the same in winter as in summer when the engine is running, the temperature in the crank case is much less in winter. This makes the oil in the crank case thicker and it does not splash as freely. Consequently, to lubricate the cylinders as well in winter as in summer a lighter oil is needed.

Location of Garage

PERSONS about to build a garage will wisely give the location considerable thought, for a motor car is not to be pushed and turned around hand as is a buggy. And not until the garage is built do many drivers see the inconvenience of backing up long distances before they can turn around. One car owner who is obliged to back out of his garage for nearly 100 feet has decided to change its location even though it means considerable expense. Among the hints for the location of farm garages are:

Select a place that is naturally well drained and that can be reached at all times of the year without going through deep mud or water.

Allow yourself plenty of room to turn around and also face the garage so you can either drive directly in or back in,

as you may desire, at any time. Avoid building the garage so near to road or lane that the car cannot be left in front of the garage without blocking the way for other vehicles.

Lastly, avoid placing it close to barns, there are car tracks.

An acquaintance of mine had a car stacks. While the car itself will not which he claimed had a most evil tendency to skid—"just the nature of the head." he applying the property of the car itself will not cause a fire, there is always a certain dency to skid—"just the nature of the amount of oil and grease around a mount of oil and grease amount of oil and grease around a garage. The practice of keeping an automobile directly in barns, implement sheds, or corn cribs is likewise a bad practice, since aside from the danger to the building, you invite punctures. Such places are hard to keep free from nails.



This practice of keeping a car in the implement shed invites deterioration and punctures. A garage is much more satisfactory

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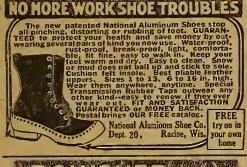
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The Farm Journal

105 Washington Square, Philadelphia

Auto Demonstrations

By W. V. Relma

AN AUTOMOBILE demonstration is supposed to show how the car will perform in the prospective buyer's hand. Frequently the buyer's dreams are shattered, but this is not always the car's fault. Sometimes it is due to the buyer's bad judgment in selection.

If a car is to be used in a hilly country, ascertain if this car will climb hills cheerfully. Of course, if the car is to be used in a level country this will not be so essential. Once I was in the rear seat of a car which was being demonstrated, and the driver was asked to climb a hill climb a hill.

As he started up the grade he shifted into second (it was a three-speed car) and at the top of the hill shifted back into high. Without the quiver of an eyelid he remarked, "It came up on 'high' easier than I expected." While such brazen misstatements are not frequently encountered it is evidently done. quently encountered, it is evidently done now and then.

now and then.

In getting a demonstration, notice how the starter works and whether the motor responds promptly or not. For every bad feature or defective performance the driver will probably have an explanation, but the buyer's success, as a buyer, will depend upon how much he decides it is proper to believe and how much to take with a grain of salt.

Good Cars May Have Off Day

On the other hand, a really good car will sometimes perform badly. For instance, I was driving a brand-new car from the factory one day, and after a mile or so of moderate running the water in-the radiator began to boil. This indicated that something was wrong; that I was out of oil, the water was low, the fan was not operating or some simithe fan was not operating or some similar trouble. An inspection showed that the carburetor had not been properly adjusted, and consequently caused overheating.

After the proper adjustment had been made I proceeded and drove the car hard for 50 miles without any further trouble. Had this trouble occurred during a demonstration it would have created a bad impression unless the driver showed that the water would not boil after the car had been properly ad-

If you desire to use the car in crowded city streets a great deal, it should be demonstrated under heavy traffic conditions. If a car is clumsy and hard to handle in traffic, the buyer would not want such a car for operation under these conditions, as it would be a continual nuisance.

Any car, new or old, should be demonstrated over some rough roads or streets. This will bring out the rattles and squeaks that are not apparent upon smooth roads. A new car should not rattle or squeak.

The weight of the car as compared with the size of the tires is of vital importance to the buyer. If a car under its usual load causes the tires to bulge widely when properly inflated, the buyer is likely to have a high tire expense. The question of proper weight to be carried by the tires is largely the secret of light tire expense.

Consider the Driver's Comfort

The driver should also consider his comfort and convenience. A very fleshy friend of mine bought a car before he had thoroughly considered the accessi-bility of the different levers and the attachments on the instrument board. When at the wheel, some of these were very inaccessible and interfered with his comfortable operation of the car.

The demonstrations should also include the action of the brakes. These are important, and they should be in condition to perform their duties properly. Frequently, agents make many extravagant claims about the gasoline mileage to be obtained with their cars. To discover just how much gasoline is used, the only sure way is to measure it.

If the tank is a round tank, a special

gauge will be necessary because a gallon will measure less in the center of the tank than at the top or bottom. If a square tank is used and it is equipped with a gauge, be sure the instrument is accurate. The best way to judge is to put a measured quantity of gasoline

put a measured quantity of gasoline into the empty gasoline tank and then run as far as it will go.

A car should run along in its usual course of travel without jerks or jumps; that is, for ordinary stopping the brakes should bring the car to a stop gradually, and not with a series of jerks. The clutch when engaged should do so easily and smoothly, and not with a jerk.

There should not be any groans or whirs emitted by the various gears. All gears in a modern car run either in oil or grease, and should be imagined, not heard.

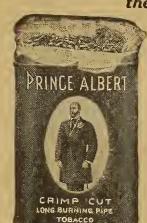
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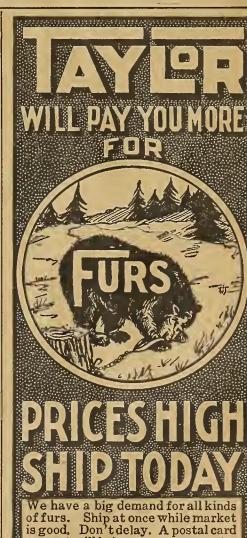
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A Drive on Garden Enemies

By L. E. Underwood

THE most productive gardens are those that are plowed in autumn and again in the spring. Fall plowing helps wonderfully in putting the soil in suitable condition for the making of an ideal seed bed in the spring. I am speaking from many years of experience in farm-garden making. We always plow our garden soil thoroughly and deeply in the fall and again in the spring, and make sure the drainage is

Before plowing it is well to make a clean-up of all litter that has accumulated on the grounds during the summer, and burn as much of it as possible, thereby destroying many of the weed seeds, also disease germs and some insect pests which find protection in the winter in the rubbish. Then the land should be given a generous dressing of well-composted barnyard manure. If the chickens are invited in to help distribute the fertility they will devour many worms and grubs. They will also enjoy following the plow in a search for any insects and worms found in the soil. It is necessary to harrow the ground thoroughly just after plowing, and especially where the early vegetables, such as onions, peas, lettuce, radishes, etc., are to be planted in the spring. Success with these vegetables depends greatly on early planting, hence the necessity of plowing the ground in the fall that it may be worked as early as possible in the spring. Cutworms, which are so destructive to tender plants in the spring, seldom do much damage where the land has been plowed in the fall. Also the effects of dry weather on garden crops are not so serious when the soil has received the double plowing. We should be liberal with our land for garden purposes.

If one does not have a long row of asparagus plants in bearing condition, now is a good time to prepare a place for at least 200 plants. The roots can be set in the spring. The same is true of other plants such as rhubarb. An acre or so dedicated to a garden and prepared as I have indicated will yield a greater return in comfort and good health to the family than any other equal area of the farm.

Get Ready for "Cants"

By F. G. Heaton

HERE is how I get cantaloupes, and lots of 'em: Begin to make ready this fall for next season's cantaloupe patch. Locate the place where the patch is to be, and drive a stake at the spot where each hill is to be located. With a pick or spading fork loosen the soil to the depth of six or eight inches, and be-fore the ground freezes hard put about a bushel of droppings from the poultry house around each stake, scattering the

ground thaws in the spring, fork the The cheerful feeling you manure in. Then, when ready to plant your cantaloupe seeds, put a big forkful of well-rotted compost into each of the hills. But be very sure you do not plant two varieties in close proximity. Rocky Fords and Osages are mighty fine cantaloupes when grown separately but a mixture of the two results in something that can only be called a cantaloupe by courtesy. Remember, that if the bees do not work among your cantaloupe blooms you are not going to have any melons, because the blossoms have to be pollinated by the insects, and bees appear to be the best workmen on this kind of job

solution of it; when ready for use, the solution should be no darker than a very light-colored tea. Sprinkle this over the plants liberally, using a sprayer or a sprinkling can with extremely small holes. The liquid appears to put out of business the corms assuing the out of business the germs causing the blight, and at the same time invigorates the plants. Cantaloupe vines are extremely sensitive, and are more easily killed than almost any other garden crop. The weakest kind of whale-oil soap emulsion, used to eradicate blight, frequently kills the vines down to the roots, and the same is true of the various arsenical solutions. The "cow tea," however, does not have this effect, although it puts an immediate end to the blight.

PRUNING of fruit trees, currant and gooseberry bushes, can be done as soon as the leaves have fallen. If left until midwinter this work is more likely to be

Time to Plant Now

By W. J. Green

GROWING early tomatoes under glass has been shown by Mr. C. G. Laper at the Ohio Experiment Station to be worth giving a trial where greenhouse accommodations are within reach.

A bed 6x9 feet, in charge of Mr. Laper, was made last year to begin yielding ripe fruit in May, and furnished two pickings a week for about two months. One picking early in June yielded 200 pounds from the 168 plants in the greenhouse.

The seed was sown early in December and the plants were grown in pots until March, when they were set in the greenhouse benches. Plants were spaced two feet apart in the bed, and were trained to two stems. They were supported by strings or wires fastened to the rafters. These plants yielded from five to eight pounds each during the season from May to July, and of course had to come in competition with Southhad to come in competition with Southern-grown tomatoes but, being of better quality, they were sold at about twice the price of the Southern product. In quality, tomatoes thus grown are less acid and of a more delicate flavor.

Winter-forced tomatoes have been found less profitable than the early summer crop, as the latter costs less to grow, is more prolific than the former and less subject to disease.

The tomatoes were divided into two

The tomatoes were divided into two grades when sold, the best grades selling for 20 cents a pound, and there were but few of the second grade. It will be seen that where tomatoes can be successfully grown and forced into bearing early in May by this method, a plot of this size can be counted on for several hundred dollars provided the several material so as to cover a circle about this size can be counted on for several two feet across. Let this lie through hundred dollars, provided there is a the winter on top of the ground, to leach market within reach which will pay a and sink into the soil with the winter premium over Southern-grown tomarains and the melting snows. When the toes.

this kind of job.

Here is a simple and effective remedy I have used for the blight that so frequently kills the vines. Get a quantity of cow manure and make a very weak

A ten-day trial of this delightful, flavory hot drink has

assisted so many to health and comfort that your friend, the Postum drinker, will tell you it's well worth while.

"There's a Reason"



THE GENUIVE - STUMP PULLERS AND SMITH

Hayes SPRAYERS HAYES PUMP & PLANTER CD., Dept. 0, Galva, III.

Before you buy any more fence, write for facts about our 26-inch ECONOMY HOG FENCE at 14%c. per rod. Many other styles and prices. Keystone Steel & Wire Co.

865 Industrial St. PEORIA, ILL.

KITSELMAN FENCE

HORSE-HIGH, BULL-STRONG, PIG-TIGHT
Direct Made of Open Hearth wire beavily galvanized—astrong durable, long-lasting, rustree sisting fence. Sold direct to the

Here's a few of our big values

47-inch Fog Fence - 15 cts. a rod

47-inch Farm Fence - 21 cts. a rod

48-inch Poultry Fence - 27 cts. a rod

Special Prices on Galv. Barbed Wire.

Our big Catalog of fence values shows 100 style

and heights of Farm, Poultry and Lawn Fence a KITSELMAN BROS. Box 271 Muncie, Ind.



Gasoline and Kerosene



Built and guaranteed by the largest producers of farm engines—simple, durable, powerful—four cycle, suction feed, make and break ignition—every part Interchangeable—fully tested. Guaranteed to Develop Rated H. P.

SAVES FUEL, TIME, LABOR, MONEY
Lowest Price, Greateat Value
Write for big illustrated Engine Book today
Full Line Detroit Engines 2 horsepower up
DETROIT ENGINE WORKS 133 Bellevue Ave., DETROIT, MICH.
Wadsworth Mig. Co., Successors
W



can be made to bring in \$100

O YOU WANT AN AUTO?

YOU CAN HAVE ONE WITHOUT SPENDING A CENT FOR IT

If you don't own an automobile, here is your chance to get one without it costing you one cent of expense. A post card with your name and address or the coupon below, properly filled out, will bring you the full details of this unusually remarkable Grand Prize Distribution. A 1917 model Overland five-passenger touring car, two 1917 model Ford five-passenger touring cars, a \$75.00

Victrola, \$50.00 diamond ring, \$50.00 fur coat and four \$25.00 gold watches and a small fortune in cash prizes will be given away. Never before has such an opportunity been within your reach. You will never know just how easy it is to get an automobile all your own, and without spending a cent for it, unless you send your name and address at once and learn all about this Grand Prize Distribution.



Find **Out More**

Perhaps when you see at the bottom of this advertisement the name of the great farm paper that is backing this prize distribution you will think you can guess what it is all about. But you can't guess the nature of this All-Can-Win Prize Distribution. Mail the coupon and get ALL the facts.

Cash Prizes

Remember, it is not

necessary to spend any of

your time that you devote

spare time only is re-

quired. Here's your chance

to get your choice of these

five gifts—and handsome

money rewards also. A

small fortune will be given

to other things.

in cash prizes.

There are No Losers

care to go at any time. A splendid prize worth many times the little effort required

T WILL cost you absolutely nothing to win one of these three automobiles or one of the other grand prizes, and we're going to give money rewards too. So you see you can't possibly lose. We have given away thousands of dollars in prizes to our friends in the past few months, but this is the grandest, most liberal prize distribution we have ever announced. Make your dreams come true-earn an automobile during your spare time.

Second Grand Prize

At the left is illustrated the 1917 model Ford five-passenger touring car that will be given as the Second Grand Prize. It is brand-new, fully equipped.

Third Grand Prize

At the right is illustrated the 1917 model Ford five-passenger touring car that will be given as the Third Grand Prize. It is brand-new, fully equipped.



Everyone Gets a Prize

TET your share of these big rewards. Don't wait, thinking you have plenty of time, but act promptly and mail the coupon NOW, before someone gets ahead of you. Surely you want one of these three automobiles or one of the other grand prizes. If you do, can you think of a quicker or surer way to get it than to sign and mail the coupon now?

Fourth Grand Prize

Herewith is pictured the \$75.00 Victrola that will be given as the Fourth Grand Prize. Thousands of homes have been made brighter, thousands of lives have been made happier, on account of this wonderful musical instrument. It will ever be a delightful compan-

As you sit marveling at its all but human music, during the long winter evenings, you can see in your mind's eye famous bands, orchestras, talented singers, funny entertainers perform for you. It is a gift that you will highly prize—a wonderful entertainer.

Mail the Coupon

Winning one of these grand

prizes is mere child's play,

but you will have to hustle

and send your name and

address at once so you can

be entitled to considera-

tion in the awarding of the

grand prizes. You don't

need a particle of experi-

ence-in fact, the less you

have the better.

Don't you dare put it off! Dig for your pencil, fill out the coupon, sign and mail it TO-DAY before you do another thing. Just for doing that you will get 5,000 FREE VOTES. This will give you a flying winning-start. Before you turn this page, sign and mail the coupon quickly.

YOU ARE GUARANTEED FAIR AND HONEST TREATMENT

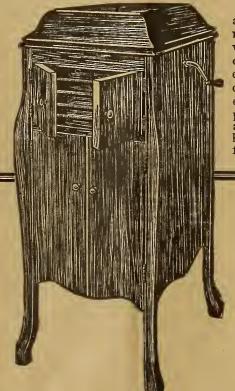
Your

Farm and Fireside's Guarantee

We wish to guarantee to the readers and friends of Farm and Fireside that this Grand Prize Distribution will be conducted with the utmost fairness in every way, and that all prizes will be awarded just as represented.

We urgently request that you send in your name and address at once, using the coupon on the right, or just a postal card will do. On account of limited space we are unable to illustrate all of the prizes to be given away. Full details and complete information of this Grand Prize Distribution will be sent you by return mail just as soon as we receive your name and address.

FARM AND FIRESIDE.



T. R. Long, Auto Contest Manager **FARM AND FIRESIDE**

Dept. M

Springfield, Ohio

YOU A FLYING WINNING-START

THIS COUPON WILL GIVE

GOOD FOR 5,000 FREE VOTES

T. R. LONG, Auto Contest Manager, Dept. M, FARM AND FIRESIDE, Springfield, Ohio.

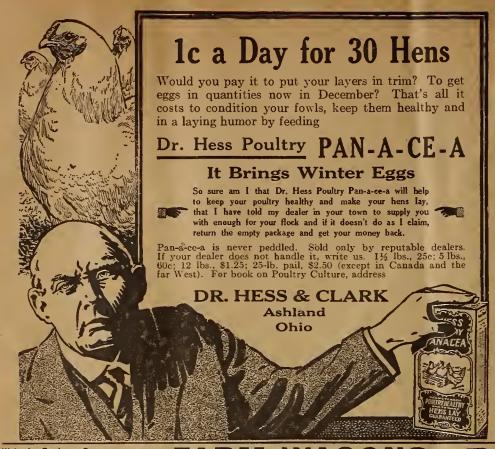
DEAR SIR:

Without putting me under any obligations, please send me by return mail full information regarding your Grand Prize Distribution. Also credit me with 5,000 FREE VOTES, and enroll my name for consideration in awarding the grand prizes.

Name St. or R. F. D......Box.....

P. O. State.....

E-W



WAGONS

High or low wheels—steel or wood—wide or narrow tires. Steel or wood wheels to fit any running gear. Wagon parts of all kinds. Write today for free catalog illustrated in

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To try in your own home 30 days free, no matter where you live. Show your friends. Sendit back at our expense if you do not want to keep it. Hundreds of thousands in daily use. Perfect bakers, efficient heaters, made of high grade material, heautifully finished, smooth design, guaraoteed for years by our Two Million Dollar Bond.

Ask your dealer to show you "HOOSIER" Stoves and Ranges, Write for our big free book showing protographs describing large assortment of size and designs of cast and steel ranges, cast cooks, soft and hard coal heaters and base burners to select from, explaining our free trial offer. Send postal today, Write name and address plainly. No obligations.

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MEN WANTED

Prepare as Firemen, Brakemen,
Motormen, Conductors and Colored
Sleeping Car Porters. Standard Roads.
Experience unnecessary. Uniforms and passes
furnished. Write now. Name position you want. RAILWAY INSTITUTE, Dept 34 Indianapolis, Ind.



Splint, Curb, Side Bone, or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered.

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W. F. YOUNG, P. D. F., 284 Temple St., Springfield, Mass.





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Work Him and Cure Him

Don't lay up because of Ringbone—Thoropin—SPAVIN or ANY Shoulder, Knee, Ankle, Hoof or Tendon Disease.

SAVE-The-HORSE

is sold with a Signed Contract-Bond to return money if it fails to cure. OUR FREE BOOK is our 21 years' discoveries treating every known lameness. It's a "mind settler." Write for it and Sample Contract-Bond together with ADVICE+all FREE.

Keep a bottle of Save-The-Horse on hand for emergency—it is the cheapest Horse Insurance.

TROY CHEMICAL CO., 60 Commerce Ave., Binghamton, N.Y. Druggists Everywhere sell Save-The-Horse with CONTRACT, or we send by Parcel Post or Express Paid.

THE"TALE"OF Send post card at once for this interesting free story. There's money for you in every line of it. CORN CROP SHORT

SAVE YOUR FEED

Don't buy corn and pay high prices. Learn how
55,000 wide awake farmers make their feed go a third
to a half farther and prevent hog cholera by feeding correct, cooked rations. Also get our 10 day trial

HEESEN FEED COOKERS Tank Heaters, Hog Troughs, Etc.

Cook feed and warm the water for your hogs, cattle, sheep and poultry this winter. It pays. All sizes of cookers. Used everywhere. Attractive prices. Handy for cooking feed, scalding hogs, rendering lard, etc.

Write us Let us show you the way to greater profits. Just send your name and address. Do it now!

HEESEN BROS. & CO. Box 701 TECUMSEH, MICH.





Live Stock

Fighting Lice on Hogs By W. L. Blizzard

F a drove of hogs is not thriving well, I they are commonly pronounced "out of condition" or "off feed," and a patent stock food or condition powder is administered. If a careful examination of the animals is made in such cases, the cause of the unthrifty condition is often di-rectly traced to the presence on the skin of large numbers of lice or other exter-

of large numbers of lice or other external parasites.

When lice increase to large numbers, as they are likely to do if not destroyed, the skin of the animals becomes covered with scales and sores. In extreme cases, swelling and inflammation develop as a result of the parasites' piercing the skin with their mouth parts hundreds of times each day in an effort to secure blood or food.

The irritation thus produced is an annoyance and worry to the hogs, evidenced by restlessness and by rubbing against any convenient object. Such affliction interferes with the growth and fattening of hogs, especially of young pigs. Lousy pigs cannot give nearly such good returns for feed consumed as can clean pigs. Lice not only produce direct injury to hogs, but also leave them in a debilitated condition, which means a greater susceptibility to various diseases.

Any treatment to prove effective rious diseases.

Any treatment to prove effective against lice on hogs must include preventive as well as destructive measures. The sleeping quarters of lousy hogs become infested with lice which crawl from the hogs and hide in the crevices of the building and in the bedding. Eggs on the hair that the hogs shed will hatch out young lice. These parasites in the building reinfest animals from which lice have been removed by treatment. treatment.

A thorough treatment, therefore, includes the destruction of the lice in the building and pens, in addition to treatment of the animals themselves.

The most convenient method of com-

The most convenient method of combating lice and mites in buildings is by applying whitewash made by slaking lime with water. One pint of crude carbolic acid should be added to each four gallons of this whitewash.

The most effective method of dipping hogs is by the use of a dipping vat which compels them to swim, and which is deep enough to allow them to be shoved under. In applying dip, care must be taken to wet all parts of the animal's body, as lice are commonly found on the inside of the legs, behind the ears, on the breast back of the forelegs, or in the folds of the skin on any part of the body. Use some reliable dip, and if necessary repeat the treatment several times.

The Big Stock Exposition By Millard Sanders

THE International Live Stock Exposition, the largest live-stock show held in the United States, will be held at the Union Stock Yards at Chicago, December 2 to 9, 1916.

the mission of the International Exposition to encourage the production of more and better live stock. The show

more and better live stock. The show is not given for financial gain, as some few persons believe.

Many farm communities are in need of just such lessons as this exposition teaches, because they are still producing types of animals not best suited to the demands of the market. The annual loss from this source is enormous. Visitors to the exposition are, so to speak, given a "short course in animal husbandry," and receive an opportunity to learn which types are the most profitable and which types best meet the demands of the market.

The International Live Stock Exposi-

The International Live Stock Exposition will this year enlarge upon its educational work, and an effort will be made to offer additional helpful information in new and original forms to all who attend the show.

National Hog Show

THE first annual National Swine Show held at Omaha in October goes down in history as an epoch maker in pork production. Sixteen hundred hogs, from twenty-one States and representing nine different breeds, were gathered under one roof. These hogs were grand champion boars and sows and junior champion boars and sows from most of the leading state fairs in the hog belt.

From the Pacific Coast States as far east as Massachusetts, from as far north as Michigan, and as far south as Texas, there came the best of each breed in the friendly battle for the prizes. There was unusual enthusiasm among the adherents of all breeds. A friendly rivalry between them whetted their interests and sent them home determined each to do his part to improve his herd each to do his part to improve his herd and help improve the efficiency of the breed with which he is identified.

Producing Pork

AT THE Iowa Station last year pork was produced on alfalfa pasture and grain eaten from a self-feeder, for \$3.73 a hundred pounds. Dry-lot fed pork cost \$4.07 a hundredweight. These figures include the rent of the land.

A 2,520-Pound Beef

By C. M. Morrison

TTOOK two days to drive John, this 2,520-pound Missouri-grown bull, from the farm near Pocahontas, where he was raised, to Neeley's Landing, Missouri. He was then put aboard the steamboat Cape Giradeau and shipped to the National Stock Yards, East St. Louis, where yeteran stockmen and to the National Stock Yards, East St. Louis, where veteran stockmen and shippers agreed that he was the biggest four-footed organism ever seen in the East Side stock pens. The amount paid by his buyer is said to have been the largest ever paid for a single beef animal at that time on a St. Louis or a Southwestern market. The price paid was seven cents a pound, the total being \$176.40.

Animals weighing from 1,600 to 1,800 pounds are by no means uncommon on the St. Louis, Chicago, and Kansas City markets, since the feeding of "big beef" markets, since the feeding of "big beef" has become a specialty, but a ton-and-a-quarter animal set a new record on the market where John was sold. This type of beef appearing on Southwestern markets usually finds its way to Boston or other Eastern markets for slaughter.

This bull was grown on a farm between Oak Ridge and Pocahontas, Missouri.

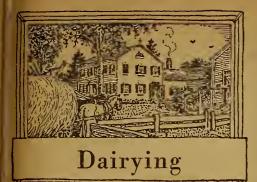
At the time of his sale he was

souri. At the time of his sale he was just about seven years old. His chief eld in the United States, will be held the United States, will be held the Union Stock Yards at Chicago, ecember 2 to 9, 1916.

The cornerstone of successful agriculgiven him with a view to putting weight ture, without which there can be no on him. He was fattened chiefly on corn lasting prosperity, is live stock. It is and clover hay.



This Missouri-grown bull is the largest beef ever sold on the St. Louis market. He weighed 2,520 pounds, and brought seven cents a pound



New York Milk Strike

By Walter H. Main

WHEN the farmers of New York State won on October 14th their fight for better prices for their milk, after a two weeks' conflict, they set an example for all producers. They won half the first skirmish against the middleman. The other half the consumer must fight out must fight out.

You probably know the story of the It is pretty much a repetition of the Chicago strike of last April, except that the extreme shortage and the consequent suffering were avoided. At no time was there a shortage of more than 60 per cent of the normal supply, ests which were already established in the State.

But now that they have won their fight, the farmers of New York display less elation than you might expect from men who have been organized only a few months. Instead of wasting time in congratulating themselves, they have already started making preparations for the next skirmish, which they know must follow.

Co-operative dairy organizations are multiplying; they are securing control of pasteurizing and shipping facilities; they are making ready to undertake the distribution of milk themselves.

The New Prices

You may have followed in the papers the daily progress of the fight through its fourteen days, from October 1st, when the milk stations owned by the big dealers became dry, up to Saturday night, October 14th, when the last of the milk dealers capitulated. It amazed the milk dealers, who anticipated going out and tickling the fingers of a few of them with gold until dissension was created and the ranks split apart. Those have been the tactics for forty years, but this time they did not work.

The reason why the farmers were not The reason why the farmers were not surprised at the winning of the fight is that they expected to win it. They were sure of their ground. They knew there was a moral issue, as well as an economic question at stake. They knew the price of cheese was climbing towards 20 cents a nound: they knew butwards 20 cents a pound; they knew butter was worth 40 cents. So they set back and watched while the executive committee of the Dairymen's League fought it out for them in the city. It was a fight to a finish, and the farmers

It would have done you good to see the stiffening of rural spines during this fight. What had been a crowd of discontented, disorganized, disheartened individuals, suddenly became transformed into a militant organization. It was a new experience for the milk companies to encounter such united resistance. They tried the old tactics of offering higher prices here and there to break the strike, but everywhere they were met with the answer, "See the executive committee; they are authorized to make the contracts."

In vain the milk companies offered a 35-cent advance in price per hundred pounds to offset the demands of the league, which called for a 45-cent in-In vain the companies came over with an offer of 45 cents on the basis of individual contracts. In vain the companies held back on recognizing the union. Every move was met with the answer, "See our committee; they will make the contracts."

daily bulletins of the Dairymen's League, exhorting the farmers to remain firm. They did.

When the last company accepted the terms of the Dairymen's League, the long milk trains resumed their trips to New York. The great wagons resumed their trips to the milk stations.

Instead of \$1.54 a hundred pounds, the average price for the past twelve months, the milk producers receive \$2.17 for October milk of three per cent test. For November and December the price

Now, the causes which brought to a successful issue this milk fight in New York State are three: Discontent, education, organization.

Farm Bureau agents stirred and crys tallized the discontent. They instigated cow-testing associations; they got the farmers to keeping books; they pointed out where they were losing money making milk at four cents and selling it at three and a half.

Farm Bureau men conducted the campaign of education. They showed how to weed out "boarder cows" and how to feed for milk. Another great educator was the Wicks legislative investigating committee. All summer it went up and down the State holding hearings and laying before the public sworn testimony of what every farmer knew, namely that it was a losing game to sell milk at three and a half cents.

Farmer Membership is 15,000

This got public opinion on the side of There was some startling testimony: how the milk concerns used devious devices to cut the price; how grain dealers combined to prevent sales of grain in wholesale car lots to co-operative dairy concerns, and similar tac-

Organization centered about the Dairymen's League, which began in 1907 to enroll a few farmers. It was the handiest center to rally about, and has grown by leaps and bounds since August 1st. From a few hundred it grew to 15,000 members, owning 300,000 cows. The normal milk supply of New York City is 2,500,000 quarts a day. is collected by wagons, brought to the shipping stations of the big concerns, shipped in iced cars, pasteurized, and distributed.

Doubtless New York is the first State to adopt a state-wide movement to bring producer and consumer together. The State Department of Foods and Markets, of which John J. Dillon is commissioner, is the great clearing house for all sorts of farm produce. It sells for farmers apples, eggs, hay, fruit, butter, anything the farmer raises, and it is doing a good job.

Public Milk Market Proposed

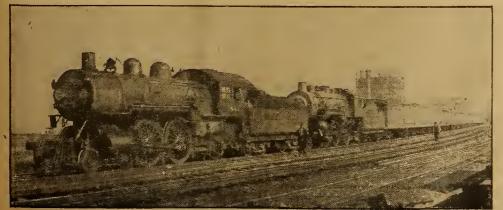
It conducts auctions in New York as the Citrus Exchange of California conducts auctions. It brings to the city the products of the farm and lays them be-fore the city on a strictly competitive market.

It is the purpose of this department to erect a million-dollar terminal station in the heart of New York to receive milk from the hills. Thither any farm-er may send milk that tests up to the city's requirements. There any city man may buy one quart or a thousand

Naturally a powerful opposition developed last winter at Albany to such a project. Commissioner Dillon went with the bill in his pocket to have his pet plan authorized. He was told plainly there was no chance of the bill's adoption. But, as an alternative, the state investigation of dairy prices was of-fered, with Senator Charles W. Wicks at its head.

Having learned the power of organization, farmers are getting together in the Empire State as never before. They are looking to the future, perfecting cooperative companies all over the dairy country of New York, with cheese and butter equipment in their plants to take care of surplus milk.

A MILKING MACHINE which will milk Back on the hills, at every crossroad 20 cows an hour can be bought and inwhere milk is collected, appeared the stalled for the price of one good cow.



New York City uses 2,500,000 quarts of milk a day. This is one of the special milk trains





Raise Your Calves on Blatchford's Calf Meal and Sell the Milk

More calves have been raised on Blatchford's Calf Meal than on all other milk substitutes combined.

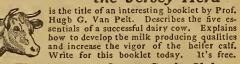
100 lbs. makes 100 gallons of milk substi-100 lbs, makes 100 gallons or milk substi-tute, costing only one-third as much as milk. Prevents scouring and insures the early maturity of sleek, handsome calves. It is steam-cooked and no trouble to pre-

Write for Pamphlet "How to Raise Calves Cheaply and Successfully with Little or No Milk." At dealers, or Blatchford Calf Meal Factory, Dept. 3 Waukegan, Ill.

Stem wind and set watch, guarantaed 5 years, for selling 20 art and religious pictures or 20 pkgs, post cards at 10c each, Order your choice.

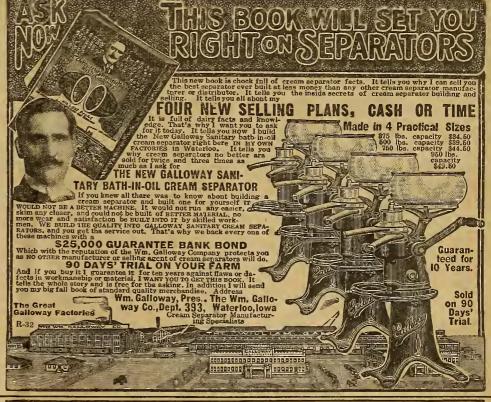
GEO. GATES CO. Dept. 220 Chicage

"Selecting and Developing the Jersey Herd"



The American Jersey Cattle Club 363 West 23rd Street











WE HAVE a very handsome gift for each Farm and Fireside subscriber this year—one that will be pleasing and in keeping with the Christmas season. It will make you think kindly of Farm and Fireside and say a good word for the paper to your friends and neighbors.

A Wonderful Christmas Package

This gift consists of your choice of a beautiful 150-piece Christmas Package—tags, seals, etc., or one of our 1917 calendars.

The Christmas Package contains 150 cards,

The Christmas Package contains 150 cards, seals, stamps, stickers, and emblems—all lithographed in colors. Here are all the little "fixin's" you need to give that delightful Christmasy touch to your gifts. It is impossible to convey an adequate idea of the delicate coloring and daintiness of this collection, as some of the articles contain as many as 12 different colors.

Contents of the Package

This beautiful gift consists of:

- 100 small and medium seals, stickers, etc.
- 10 cards and tags
- 8 large cards and labels
- 32 gummed stamps, assorted sizes and colors

Each article is lithographed in many colors and will reach you in a strong tension envelope all ready for use.

Our Handsome 1917 Calendar

ANOTHER dainty gift we have ready for you is our 1917 Calendar—an exceptionally lovely Christmas gift. It is panel shape, 16 inches long by 11 inches wide. The picture is an exquisite reproduction of Henry Mosler's painting "The Birth of the Flag." On another page of this issue of Farm and Fireside, we show a small illustration of the calendar. Of course you can gather only a faint idea of its appearance from such a small picture. The Calendar itself is

Printed in Ten Colors

It depicts one of the most famous incidents in American history, showing Betsy Ross and her companions making the first Old Glory in her little upholstery shop in Philadelphia in May, 1777. Every American heart thrills at sight of this picture. You want it to hang on the wall of your home so that you may keep fresh and green in your heart and mind the beautiful sentiment expressed by our national emblem—the American Flag.

One of These Gifts is Yours

You can have your choice of the Christmas Package or Calendar with your new or renewal subscription to Farm and Fireside, in addition to any other offer, if your order reaches us before December 20th. Simply state that you want the Calendar or Christmas Package when ordering, and we will see that whichever gift you choose is mailed promptly and postpaid, or you can receive the Calendar or Christmas Package with one of these

Special Bargain Offers

Offer No. 1

SEND 85 CENTS to pay for the renewal of your FARM AND FIRE-SIDE subscription THREE YEARS and we will send either the Christmas Package or the Calendar, free and postpaid.

Offer No. 2

SEND 60 CENTS to pay for the renewal of your FARM AND FIRE-SIDE subscription TWO YEARS and we will send either the Christmas Package or the Calendar, free and postpaid.

Offer No. 3

SEND 35 CENTS to pay for the renewal of your FARM AND FIRE-SIDE subscription ONE YEAR and we will send you either the Christmas Package or the Calendar, free and postpaid.

Club Raisers We will send a Christmas Package or a Calendar, free and postpaid, to any club raiser sending us one yearly subscription at 35 cents. See your neighbor.

REMEMBER! Order before December 20th, and be sure to address your order to Dept. 87.

FARM AND FIRESIDE, Department 87, SPRINGFIELD, OHIO

Christmas (O)

Golden Locks and Her Baby Sisters

E KNOW all our little girl friends will want to meet Golden Locks and the Baby Sisters and have them for their very own. Golden Locks is over two feet high, has bright curly hair and big brown eyes. She is as big as a real baby, and is absolutely unbreakable. You will just love these dollies, because they are so entirely lovable.



The Baby Sisters

These dollies will make any little girl or boy happy. They are just the thing for doll parties, playing school, and so forth. If you are a little boy or girl, ask your mama or your papa to send for these dolls for you, or if you know of some little girl or boy whom you would like to make happy, send for these dollies to-day. They make a very beautiful gift. We are giving these dolls away with Farm and Fireside. All three are beautifully and brilliantly painted in many colors on one large sheet of cloth, and simple, easily understood directions are given for cutting, sewing and stuffing. By utilizing a few spare minutes Mother can make her little ones very happy in the possession of one of these doll sets.

HOW TO GET THEM

You can get all three dollies very easily. But you *must hurry*, for we only have a small supply of dolls. Read these liberal offers:

Offer Send 50 cents for a ONE-YEAR subscription to FARM AND FIRESIDE, either new or renewal, and the dolls will be sent you by return mall postpaid.

Offer Get two of your friends to pay you 35 cents each for a ONE-YEAR subscription to FARM AND FIRESIDE, send us the 70 cents and the names and addresses, and we will send you the three dolls by return mall, all charges paid.

Address orders to Farm and Fireside, Springfield, O.

Golden Locks Dolls Coupon

FARM AND FIRESIDE, Springfield, Ohio

86-12-2

GENTLEMEN: Enclosed find \$......, for which send me FARM AND FIRESIDE years and the Golden Locks Doll set, postpaid. I am also to receive, without additional cost,

as a good-will gift one.....

(State whether you want Christmas Package or Calendar)

if my order reaches you on or before December 20th.

Name

St. or R. F. D.State.....

Preserve Wood Silos

By John Coleman

CONSIDERING that over 100,000,000 board feet of high-grade lumber are used annually in the construction of wood-stave silos, the durability of that wood is an important matter. Untreated wood is subject to decay, particularly near the foundation. Even such durable woods as cypress and redwood are not immune.

To prospective purchasers of stave silos the U. S. Department of Agriculture gives the following hints: Of the various preservatives in general use a good grade of coal-tar creosote is very satisfactory for preserving timber. Superficial methods, however, such as applying with a brush, dipping in the preservative, or spraying, are not sufficient.

By far the best method is to have the staves treated with the preservative in a closed retort under pressure, and when so treated they should last indefinitely. Those considering the purchase of treated silos should investigate the methods used and, if greatest permanence is desired, should choose only material that has received a thorough pressure treatment.

Silos built of well-treated wood need not be painted, and are kept tight more easily since they shrink and swell very little. The preservative does not injure the silage nor affect the health of the

How to Submit Titles

AS EXPLAINED by rule 4, the Reprint and Reply Book enables a participant to submit six title suggestions in one set. This is the maximum number of title suggestions permissible in one set. It is not compulsory, however, that participants use the Reprint and Reply Book. Sets of title suggestions may be submitted in either one of two ways: (a) In the Reprint and Reply Book; (b) participants may also submit sets of suggestions written on forms supplied by the participants, either with pencil, pen, or typewriter, preferably on sheets of uniform size. Each sheet must be numbered in order, and have pasted thereon a duplicate, easily recognizable, beneath which picture or drawing is to be placed one title suggestion (one only) for the picture, and the player's name and address. If a player desires to submit more than one title suggestion for a picture, the additional title must be included in a second complete set prepared according to the foregoing directions.

additional title must be included in a second complete set prepared according to the foregoing directions.

In other words, when submitting single sets of title suggestions, each set must include no less and no more than fifty pictures (Nos. 1 to 50) with one title suggestion for each picture and with the participant's name and address written on the bottom of each sheet in every such set. When submitting single sets of title suggestions, the pages must be arranged in numerical order, securely fastened together, wrapped flat, and sent prepaid by express, or postpaid with stamps affixed at the rate of 2 cents per ounce.

Those who do not wish to go to the trackled

Those who do not wish to go to the trouble of submitting their sets of title suggestions as above, can use the Reprint and Reply Book. This contains the fifty pictures used in the Farm Implements Puzzle Game, and opposite each picture are spaces for six title suggestions to each picture. These spaces are numbered, one, two, three, four, five, six. As explained by rule 7, you should, when submitting more than one title suggestion for any picture, place the suggestion you regard as best at the head of the list of title suggestions, for that picture; your second best suggestion in second place, etc. This applies to sets submitted in Reprint and Reply Books. See special announcements on pages 21 and 24.

Where Brush Became Coin

[CONTINUED FROM PAGE 3]

condition of the forage and other animals using the pasture at the time. The sheep are seldom run in the same pasture with the hogs, and cattle always precede sheep in a pasture.

We also have all our cultivated fields fenced with woven wire, so they can be pastured at some time during the year. The cornfield, for example, when the corn is mature, with some grass and weeds among the corn and along fence rows, makes excellent sheep and lamb pasture. The animals will nicely clean the cornfield of summer grasses, and will not injure the mature corn in the least if it is standing up well. We also, in some cases, sow cowpeas or rye in the corn at the last cultivation, and these catch crops make excellent late summer and early fall pasture in the corn for shear.

E-W

No. 905

This is Golden Locks.
She is an immensely big doll. nearly two feet

She is an immensely big doll, nearly two feet; tall. She can wear real baby clothes. What a wonderful gift she and her baby sisters will make. Better hurry, only a few sets left.



FERRETS FOR SALE—Either color, any size, singles, pairs or dozen lots. Catalogue free. C. II. KEEFER & CO., GREENWICH, O.



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Getting Clear of Diseases

By B. F. W. Thorpe

WHERE medium-sized flocks of farm poultry are kept there is quite a convincing argument in favor of inexpensive and portable houses. Where such a contagious and serious disease as tuberculosis gets well established in a flock, as a rule it pays to destroy old buildings and to get rid of all the suspected birds and start fresh with new stock in place of trying to cure the birds of the disease or get the old buildings free of disease germs by disinfection.

For example, a poultryman of my acquaintance whose flock of layers consisted of about 150 hens found that his flock was badly infected with tuberculosis, and his losses averaged from 40 to 50 per cent of his layers each year from this disease. His poultry house was fairly tight and warm, but was conwas fairly light and warm, but was constructed of inexpensive material, and the germs of the disease seemed to be established in the walls, ceiling, and furnishings of the house without much chance of getting rid of them by any practical means of disinfection. He therefore decided to sell all of his stock that was fit for market, kill and burn the carcasses of the worst cases, and begin the next spring with entirely new stock.

He burned the poultry house entire, plowed up the foundation site, and grew a crop of rye on the site during the fall. He then built a new poultry house which was plastered throughout, sides and ceiling, with the exception of three feet of matched baseboard. The floor was made of concrete. He then had a house interior which he could easily and thoroughly disinfect by spraying. In this he established a new healthy flock of several dozen breeders, and last spring hatched and raised sufficient young stock to give him a new flock of about 200 layers. This poultryman now believes he can control the disease situation in his flock, and I think he is right.

Laying or Colony House By Frank W. Orr

THIS combination of gable-and-shed type of poultry house has the advantage of furnishing more overhead room for the poultryman, also better summer than the shed most type of ventilation, than the shed-roof type of house. But it requires a little more work for construction and expense for material.

A window on the east side is of advantage to get the early winter sunshine and additional light for gloomy days. A convenient size for this type of house is 12 feet wide by 16 feet deep; front 6 feet high, ridge 8 feet, rear 4 feet. For these dimensions cut the rafters 6 feet 6 inches long for front and 12 feet for rear, to furnish plenty

of overhang.

The bill for material will not vary much from the following figures:

2 pieces 4x4, 16 feet long. 2 pieces 4x4, 12 feet long. 17 pieces 2x4, 12 feet long.

10 pieces 2x4, 18 feet long. 2 pieces 2x4, 14 feet long.

Matched flooring, 420 feet (board measure).
Matched boards, for siding and roof, 600

feet (board measure).
5 rolls roofing paper. windows.

yards muslin.

125 lineal feet 3-inch furring for curtain frames, etc. 3 lb spikes.

20 lb nails.

This size poultry house will accommodate about 50 layers, or from 500 to 800



chicks when used for a colony house with a stove brooder. The approximate cost of this building, including the materials and labor, was not far from \$50 when recently built by a FARM AND FIRESIDE New Jersey reader.

"Hoganizing" the Hen By H. K. Crockell

ALL over the country the discussion of the best means of picking the layers is going on, and nearly every day something is being added to the various means of making an intelligent selection of the best layers without going through

the operation of trap-nesting.

At the "All-Northwest" egg-laying contest to take place at Pullman, Washington, there will be an examination made of all the 1,200 hens entered in the made of all the 1,200 hens entered in the contest by Mr. Hogan, a California poultrman, who lays claim to being able to pick the best layers by merely handling the hens. A record will be made of the result of each hen examined by Mr. Hogan. Then, at the conclusion of the contest, the public will be able to learn just what the opinion of this specialist amounts to in regard of this specialist amounts to in regard being able to pick the best layers. Mr. Hogan's system of picking the layers by handling them has come to be known as "Hoganizing" the hens.

Controls Deadly Disease

WHOLESALE loss of young chicks from bowel trouble has put a lot of poultrymen out of business in the sections where this disease has become prevalent. W. F. Kirkpatrick has devoted several years at the Connecticut Experiment Station investigating this



W. F. Kirkpatrick is in charge of poultry at the Connecticut Experiment Station

contagious form of bowel trouble, popularly known as white diarrhea, in cooperation with Dr. L. F. Rettger of Yale University. They found that the infection responsible for this fatal form of bowel trouble is harbored in the ovaries of some hens the eggs of which may infect the chicks hatched therefrom.

By testing a few drops of blood from hens that are candidates for breeding pens, a poultryman can tell whether his hens carry the germs of infection of this disease. More than 20,000 hens have been tested for Connecticut farmers by the poultry department over which Mr. Kirkpatrick has supervision.

Three of the five Connecticut egg-laying contests have been conducted by

ing contests have been conducted by Mr. Kirkpatrick. Year records of about 3,000 hens have been secured, and the high-record hens and their progeny are being scattered broadcast for improve-ment in egg production.

Crate Feeding Makes Money

By John Sampson

INSTEAD of letting the chickens, ducks, and geese remain on range when finishing them for the Thanksgiving market, place them in a well-ventilated, slatted coop where they will be dry and comfortable and yet have plenty of air. Place troughs outside the slatted coops where the chickens the slatted coops where the chickens can reach conveniently, and try a ration of 60 pounds corn meal, 40 pounds wheat middlings, 5 pounds fine beef scraps, moistened with skimmed milk or buttermilk in the proportion of one and one-half pounds of milk to one pound of the dry feed. The best results have been secured by feeding this mixture twice a day all the chickens will clean up in from twenty to twenty-five clean up in from twenty to twenty-five minutes. From two weeks to eighteen days of this crate feeding is all that is generally found profitable. Good vigorous stock will put on a pound of gain with this ration under the right conditions, at a cost of about five and one-half cents a pound. Of course, plenty of fresh water should be in reach of the crated poultry.

IN COUNTING the profit from geese, one should keep in mind that the cost of housing is very much less than in the case of hens. All that is required is a sleeping place that is tight on three sides and provided with plenty of dry litter. Vigorous geese will spend most of their time in their outside runs of their time in their outside runs.



PROTHER! Just get your D fingertips inside a Mayo 10rib garment and feel that fleeced inner surface.

"Velvety," say you. Right. Imagine how good it feels when the icicles hang from the house 10 inches to 1½ feet long.

But the velvety hug of Mayo Underwear is due to far more than its fleeced inner surface. Mayo has the same knitting that's found in dollar underwear-ten ribs per inch instead

You can easily prove that by putting a ruler next to the fabric and counting those 10 ribs.

Does that close, snug, 10-rib knitting turn winter into June? It does! Will it turn your winter into June? It will! Get your Mayo underwear before winter gets you.

Men's Single Garments Men's Union Suits Boys' Union Suits

Those who prefer the old-style 8-rib garments will find Mayo 8-rib Underwear an excellent value.



The same 10-rib knitting that's found in dollar underwear

All dealers have Mayo Underwear or can very quickly get it for you.

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Chopper

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The Enterprise" Food Chopper is lower-priced. Has four cutters. Small size, \$1.25; Family size, \$1.50; Large size, \$2.25. Cook Book: "The Enterprising Housekeeper", 200 tested recipes and household hints. Sent for 4c in stamps.

THE ENTERPRISE MFG. CO. OF PA. Department 96 PHILADELPHIA

In which the truth of an old adage is shown— "When thieves fall out just men get their dues"

Hearts and Hazards

Gertrude Receives a Letter and Sees a Rival

By EDWIN BAIRD

PART V

HERE'S WHAT HAS ALREADY HAPPENED: Ben Abbott learns that Henkel, a Chicago confidence man, is trying to induce Mr. Sage, Abbott's employer, to invest heavily in a scheme to manufacture gasoline at a penny a gallon. Abbott is in love with Gertrude, Sage's daughter, but, intoxicated with Henkel's pictures of city life, she tells Abbott she hates the farm. Henkel tries to get Gertrude's help in influencing her father, and Mr. Sage orders Henkel to leave the city. In talking to his accomplice, Blackie, he makes some unpleasant remarks about Gertrude and Abbott knocks him down. Gertrude believes that Henkel was attacked unjustly, and has a bitter quarrel with her father. Abbott hears of it, gives up his position, and goes back to his farm.

"THINK," said Ben, choosing his words with care, "it's a little because of both."
"You've heard of the disagreement between my daughter and myself?"
Ben nodded.
"And you know what caused it?"
"I heard— Yes, I know what caused it."
"Then don't you think," said Sage with paternal persuasion, "it would be best to tell me why you came to strike that hound in the face?"
Ben drew a deep breath.

Ben drew a deep breath.

"I'll tell you the whole trutk, Mr. Sage, in a dozen words, if you will promise not to mention it to anybody else."

words, if you will promise not to mention it to anybody else."

Sage nodded for him to go ahēad.

"Well, I happened to overhear Henkel speak of Miss Sage, and I didn't like his speech. And that," concluded Ben, turning to go, "explains it all."

"But hold on!" cried Sage, beside himself with joy. "Don't run away! This changes the complexion of the whole thing!"

"I'll have to be going," said Ben, freeing himself from Sage's detaining grasp. "I haven't had my supper yet, and it's getting late—"

"Well, by George, a pretty excuse! Come in and eat with me, you rascal!" Sage attempted to drag him toward the house.

"No; I'll have to be going. Good night. And don't forget, Mr. Sage, that you promised not to tell."

But Sage's new-born delight did not decrease as he saw the enveloping darkness swallow Ben's powerful form. His eyes still shone, and his heart filled with content, the first he had known in upward of a week. For he was thinking:

"I didn't promise! I only nodded. I didn't way I wouldn't tell. And Ben should be vindicated."

And then he went indoors to tell Gertrude all about it.

As Ben had predicted Gertrude

And then he went indoors to ten Gertrude all about it. As Ben had predicted, Gertrude would not believe a word of it. "He made it all up," she spirit-edly declared, when her father had finished, "just as he made up that

finished, "just as he made up that other atrocious story against Mr. Henkel. Dad, I'm surprised that you can still believe in this man. Can't you see he's simply adding one slanderous falsehood to another?"

"Nothing of the sort!" protested Sage emphatically; but she would not listen.

"Mr. Henkel is a gentleman," she hurried on, "while this bumpkin, Ben Abbott, hasn't one single spark of decency. His behavior, all the way through this disgraceful affair, has proved that. It's just like him, after almost killing poor Mr. Henkel, to hide behind my skirts; to drag my name into it and pretend he was fighting for me. Who but a cad would do such a thing? Oh!" she raged, closing her fists, "I wish she raged, closing her fists, "I wish

I were a man! Sage, ascending to his room that night, trod the stairs heavily, sighing at every step. He paused while removing his shoes, and sat on the edge of the bed, thinking. Suppose he secured some proof besides Ben's word? Ben's word, of course, was enough for him, but it was obvious enough that Gertrude wouldn't believe it on oath. If, therefore, he could find another person who had overheard Henkel— Here Sage's thought in that direction came to a close, retarded by the same consideration which had made Ben silent when repeatedly urged to tell what started the fight. It would never do to have it publicly known that Gertrude's name had been sullied at the started that a decrease has a decrease to the same had been sullied at the same that the same to have a same to same the same to same the same to same that the same to same the same that large by a drunken crook of Henkel's stripe. From the horror of that, Sage recoiled with loathing, and hemmed in on every side, recognizing the hopelessness of ever convincing his daughter of the truth, he undressed and went dolorously

On his daughter's bitter attitude he said nothing to Ben next day, nor the next. On the day after that, Saturday, Ben left the firm of Sage & Company, never to return there again.

The black clouds which now obscured Ben's horizon were mitigated by one bright ray of sunshine-he would be able to resume his chosen work at least a month earlier than he had expected.

His mother, enkindled by his enthusiasm, was as

His mother, enkinded by his enthusiasm, was as eager for the farm as he, and preparations for returning moved forth apace. A tenant was found for the Peoria cottage; the household goods were packed; Lucy went to Springfield to stay with Aunt Ella till school opened; and at last Ben and Mrs. Abbott started for the railway station. It was within walking distance, and they went afoot, he with two thumping suit cases, she carrying the cage which enclosed her canary.

her canary.

En route they passed the Sages' home; and Ben, lifting his eyes that way, saw Gertrude on the veranda with a crowd of gay young people, all making merry in the warm afternoon. She, apparently, was the merriest of all, and he wondered if it was because she knew he was going away. Thereupon he was overwhelmed by a rush of unhappy memories which he had been trying to drown in the swirl of these last few husy days.

But the world wore a different hue, once he was established on the farm again. Back in his native environment—and it was the only environment for which he really cared—he felt as a bird released from a trap to fly at will. The harvest was beginning, and he was busily occupied from dawn till dusk. He ate enormously, his mind always on the work ahead, and he went to bed early and slept like a child.

HIS life thus crowded, there was no room or time for melancholy musing, but there came periods, after the second week, when he looked sadly back over all that had happened since that Sunday afternoon he had tried to say he loved her. These wistful thoughts of the past were bred in solitude, and came only during the rare intervals in the twenty-four hours when he was not engaged with the work of the farm. Sometimes too, though not often, when working in the fields he would have the feeling that his life was not the perfect thing it seemed to be. He was conscious at these times of something lacking—of a vague yet undeniable void.

Because of the blinding passion which had inflamed his fighting blood that night, Ben had not discerned

that Henkel's words were heard by another—namely, the furtive-eyed person to whom these words were addressed. And, though not disinterested, Blackie was destined to be the one to impart this knowledge

Descending to breakfast on a warm morning in late August she discovered her parents discussing a matter which patently concerned her. Sage passed her the morning newspaper, at the same time indicating an item on the first page.

"Read it," he said briefly. "I think it'll interest you."

IT WAS about Henkel and, as she read, a swift revulsion went through her. Henkel had been arrested for swindling a Chicago woman out of two thousand dollars in a fraudulent stock scheme, and he now languished in the county jail of that city.

"Who's lying now?" chuckled her father.

She devoted herself to sliced peaches and cream, and said nothing.

"Seems to me—" he began, but his wife, looking at him meaningly, shook her head with vigor, and he desisted. After all, there was no use of rubbing it in.

Gertrude's initial repugnance changed, after breakfast, to a sense of shame—that she, who had always thought rather well of herself, could have been infatuated with such a creature! And this feeling crystallized when the postman came, bringing a letter addressed to her in lead pencil. The enclosure, similarly inscribed, began without preliminary:

i want to wise you up to something i think you oughta know. that guy, Abott i think his name is, slamed Henk that night because he herd Henk speek dirt of you. i wont repeet the dirt Henk said, but it was enuf to make this Abott all-fired mad. i dont blame him for what he done. Henk is a no-good guy, he aint even square with his pals, i & he was side kicks once but he double-crost me.

Folding the sheet of cheap paper, Gertrude stared bitterly off into the shady yard, a bright gleam in her long dark eyes. She was breathing a bit more rapidly than usual, and her under lip was drawn in between

She started thirty minutes later, feeling an urgent desire for haste, now that she had decided to see the ordeal through. But when she drew near the Abbotts' farm her courage began to evaporate. Every unkind thought she had spoken of him, every unjust act, was now green in every unjust act, was now green in her mind and accusing, and she felt she would die rather than go to him with an apology on her lips. No apology, she firmly believed, could ever undo the wrong she had done. She drew within sight of the two-storied farmhouse and motored

storied farmhouse, and motored past it, telling herself she would return in a minute—or as soon as she had her courage back. And then she saw him. He was leaning against the wire fence which separated his farm from the one adjoining, and he was talking with a comely young woman, who also leaned against the fence.

Immediately Gertrude, seeing a way out, pounced upon this excuse. Of course, she reasoned, he would not care to be interrupted now, so the only thing to do was to go back home and write him a letter. She left promptly.

Ben meanwhile, having glanced toward the road and failed to recognize the heavily 'veiled young woman in the automobile, turned back to Carrie Ortmann, his neighbor's days that and finished. back to carrie of thinking in the bor's daughter, and finished explaining to her the most efficacious way of fighting army worms.

[TO BE CONTINUED]



He was leaning against a wire fence talking with a comely young woman

Reward of Generosity

By Ernest Bourner Allen

VICTOR HUGO once wrote of his own reputation as "a little puff of smoke, called glory, which a summer's wind may deprive me of." No wonder the great leader of the early Church, Paul or house his friends to do nothing Paul, exhorts his friends to do nothing "through strife or vainglory, but in lowliness of mind let each count other better than himself." General O. O. Howard was a man of modest spirit, whose greatness suffered nothing by being generous and unselfish. During Sherman's campaign in the South, there being a change of commanders, General Howard was promoted to lead a special division.

Long afterward, on the night before the grand review in Washington, Sher-

man sent for him:

"Howard," he said, "the political friends of the man you succeeded are bound that he shall ride at the head of his corps, and I want you to help me out."

"It is my command," said Howard,
"and I am entitled to ride at its head."
"Of course you are," said Sherman.
"You led them through Georgia and the
Carolinas; but, Howard, you are a
Christian, and can stand the disappointment."
"Putting it on that ground, there is
but one answer: let him ride at the
head of the corps."
"Yes, let him have the honor," added
Sherman, "but you will report to me
at nine o'clock, and ride by my side at
the head of the whole army."
Howard protested, but in vain, for
Sherman gently but authoritatively re-

Sherman gently but authoritatively replied, "You are under my orders." And the next day, at Sherman's side, he led in the grand review.

Wisdom at Work

By William J. Burtscher

VISDOM is the principal thing; therefore get wisdom.

If he who gets wisdom does not get with it the tact to do his work in an easier and better way than he has always done it, he still lacks the wisdom

of putting his wisdom to work for him. A lad in southern Indiana was engaged in raising ducks. At feeding time his mother's chickens would show bad table manners and make it difficult for the ducklings to get a square meal. So the boy got wisdom and put it to work at once. He built a platform in the duck pond, on a level with the water. On this he scattered with feed for the ducks, and the ducks swam to the are songs b platform and there are their meals un-back home.

molested, while the chickens stood on the bank and looked on.

Thus it is with the world and her two classes of people—those who are in the swim, and those who are not. little boy, the world shows partiality to the swimmers, and makes it convenient for them to relish the good things they desire, while those who cannot swim are obliged to stand at a distance and look

on.
The chickens were not in the swim because they are not built that way, but people are not in the swim because they lack the gumption to put their wisdom to work. If there had been such a word as gumption in the time of Solomon, I am sure that he would have said, "Gumption is the principal thing; therefore get gumption." fore get gumption.

fore get gumption."

Every man has it in him to become an expert at something, if he begins early enough and keeps at it earnestly enough. He may have dislikes and weaknesses. Practice will make him like what he once disliked, and will make his weakest point his strongest, for he shall practice strength into it. Practice is wisdom at work. Such a man will be what the world calls in the man will be what the world calls in the swim, and he shall have all the good things that he desires.

Get wisdom, therefore, and put it to

The Little Singer

By Edgar L. Vincent

RECENTLY, in the leading church of a city of about sixty thousand, the preacher had a little helper of whose presence he had not previously dreamed. The choir had sung its anthem. It was beautiful, and those who listened were lifted up in spirit by the sweet notes from the lips of the men and women clustering round the great organ.

clustering round the great organ.

Then when the notes of the instrument had died away and all was still in the church, clear, soft, and beautiful on the air rose the bird-like song of a little girl. There were no words of that sweet song; it was just the trill of a dear, innocent soul; but it did more to bear the thoughts and dreams of those who listened to it heavenward than all who listened to it heavenward than all the greater choir had been able to do. Men looked at one another and smiled, but their eyes were soft with something that would not have been there had it not been for the music of the child

And when the minister came to take up his part in the service of the hour, he found that the hearts of those who sat in the pews were like well-plowed ground, ready and waiting for the seed he was to sow. Now and then the pure, sweet voice would break through the preacher's sermon; but he did not mind it, for he knew well that God had given him a helper such as he never had had before, and that his ministry for the day never would be forgotten, and all

because of a baby's song.

The ministry of a little one's voice! Is there anything by which to measure this sacred influence? Not alone in church but in the home, your home and mine, all that is good and best in life is wooing us through the lips of the wee ones that have been lent to us for a little while. Shall we not listen? These are songs by which God wants to win us

Have You Entered?

ON PAGE 24 of this issue, readers will find five pictures representing farm implements, machine parts, or mechanical terms, and presented without titles having been selected for them.

These are five of fifty pictures constituting the Farm Implements Puzzle Game being conducted by this publication. If you have not yet started playing the Farm Implements Puzzle Game These are five of fifty pictures.

These are five of fifty pictures.

These are five of fifty pictures.

Turn to page 1.000, and the other 399 awaing the Farm Implements Puzzle Game, we would urge that you send in the blank below or, better still, turn to page 24 now and look at the pictures appearing there.

Turn to page 24 now and look at the pictures appearing there. We are sure they will interest you, and we are sure, also, that you will immediately think out titles for them, so it should not be necessary to urge you to send in one of thanks, either the one below or

24 will bring you all the needed materi-

necessary to urge you to send in one of the two blanks, either the one below or the one on page 24.

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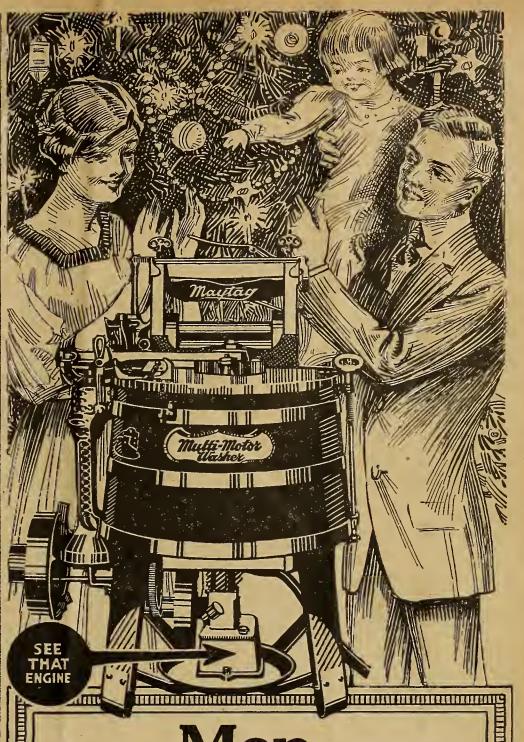
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This request places me under no obligation of any kind.



Men-Put a Maytag Washer In Your Home This Christmas

Again the spirit of the Gentle Prince wells in the heart of mankind and touches all with its potent tenderness.

Again the age-old problem of what to give ruffles the serenity of the season. Yet the problem is not difficult of solution. As the tendency today is gifts of practical, permanent worth, nothing would be more acceptable, more appreciated by Wife or Mother than a

Maylag Multi-Motor Washer Swinging Deversible Wringer

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DEALERS: Our proposition will interest you. Writel

Kidnapping a Cook

[CONTINUED FROM PAGE 7]

Slushy Slim could not resist the poetic possibilities of the occasion and, gazing sentimentally at the float-

"Just tell that schoolmarm I died well, If I should drown and go to ——"

He looked dripping and unpoetical as he came up and mopped his face with a dusky handkerchief. He got a fancy "18."

Bachy scored a wiggly "20," and then everyone called for old Toothpicks. He positively refused to submit to the test. They had to pick him up bodily, grab his hat off, and if or other stick his head in. Once

in, he stayed, as if determined to drown.

"Fifteen," sang Blizzard; "twenty...
gee-ee!... twenty-five—I believe he is wantin' to drown...
thirty... thirty-fithirty . . . thirty-fi— Oh, his years is blue, pull him out, boys!" They had to admin-

ister a whole quart of whisky to restore him to consciousness and

the joys of living.
"Now, none of the rest of you hadn't better try no such sui-cides, we ain't got cides, we ain't got enough whisky left to go round. Next—"
"Oh, Frizzly Fred-

dy! Let's see what he can do."

Frizzly ran his big brown hand through his hair, shredding the blond curls that lay on his forehead, the red surged his cheeks, and his bright eyes were shut tight. En-thusiastically he ducked, choked, stran-gled; enthusiastically he bumped his head on the bottom and bounced up, terrified. "Three seconds!" howled big Blizzard. The bachelors were

hilarious; they danced and roared and slapped Frizzly on the back, expressing their sympathy: "Poor old cuss!"

"A sad thing, sure!"

"You got my prayers, child."
To all of which, Frizzly smiled a rather jaded smile

and tried to appear lighthearted.
"Oh, you fellows is only jealous. I wanted to go all the time, that's why I suggested it." And then further to prove his unconcern, he boldly started up the ranch anthem: "Oh, my coffee tastes like glueoo-oo." But his voice sounded artificial and chokeful, and completely general the completely general the same and the like the completely general the same and the like the completely general the completely general the same and the like the completely general the same and completely squeaked away at the end of the line

into a long, long sigh.

"Never mind, old snick," consoled Blizzard, "you don't have to tell us how badly you feel; we all know."

"But say," from Gloomy, "he'll have to take a shave if he's goin' to pose as the ad for this here concern.

Why, his face looks like a porequire what's relied in Why, his face looks like a porcupine what's rolled in sheep's wool."

"He does look fierce, but it's too big a job for me,"

declared Bachy. They took out the three rusty camp razors, stropped them on the legs of their overalls, and started to operate.
"You're cuttin' me all to Hamburger," complained

the victim.

"Oh, well, the schoolmarm won't mind; these little gashes only emphasizes your looks and proves you've been through the process."

Frizzly spent a night of wild, strange dreams and morbid hallucinations. His bunk was the top one. All night he pitched and groaned. At first he decided to shoot himself; then, becoming calmer, he resolved simply to disappear forever. More tossing, and moaning—no, he'd do it; "by gosh," he would, he'd show them what a lady-fetcher he was.

He'd threaten her with a gun. The idea was atrocious, Frizzly gasped with the shame of it. He'd beg her on his knees, his face burned with the embarrassment of it. No, he must make up a sad, sad speech, a speech that would make an icicle cry like a baby.

Here Frizzly dozed, and the next thing he knew he came clattering down to the floor, interrupting Blizzard in the middle of a long-drawn melodious snore. Blizzard rubbed his eyes: "Darn you, a-tryin' to Blizzard rubbed his eyes: "Darn you, a-tryin' to commit suicide, are you?" He grabbed his lariat, tied Frizzly hand and foot, and compelled him to sleep under the table the rest of the night.

MISS WEEKS, the pale little "schoolmarm" at Big Breezes, was trying to close up her small log schoolhouse. It was almost dusk and Christmas Eve. The snow had drifted in and frozen on the door sill. Miss Weeks was heroically chopping at the ice with the school ax. Suddenly a horseman appeared in the yard and rode right up to the door. He wore shaggy wolf chaps and a six-shooter; there was a festive red handkerchief knotted around his throat and great scarlet scratches on his cheeks. His expression was

startling.
"It ain't the right and poetic way to deal with the ladies; but, by gosh, it's the only way I ever learned to get what I wants."
This mumbled observation greatly alarmed the

schoolmarm. She frantically dropped her ax and started off.

But it was too late; a skillfully hurled lariat pinned her arms to her sides, and a strong but trembling cow-puncher's arm reached down and raised her to

The schoolmarm screamed, and fought desperately. "Now, woman, do shut up," he consoled as he slipped behind and dug his spurs into the horse, "you're only scaring the bronc."

Miss Weeks but screamed the harder and, suddenly turning, grabbed Frizzly by his front curls with one hand while with the other she menacingly flourished a



Then the bachelors crawled to the top of the slippery snow of the bunkhouse. With cowhorns blowing and coaloil cans beating, they seemed armed to the teeth with welcome

"Let me go, you crazy man! Let me go, you wicked brute, you dreadful, you—you! You just let me go, I say!"

"Lord, woman, you think I'm going to leave you go now, since I got you? No, not for all the hair on my skull."

Just then the broncho gave one wild jump and tried to stand on his head. The schoolmarm grabbed the horse by the mane and hung on frantically. "Go easy, now, he's clear gentle, ain't used to packin' double, that's all. Keep still and hang on to the horn. Now, there, he's gettin' all right— Ain't used to women's screamin' around and pullin' his hair, that's all"

THE little schoolmarm began to sob hysterically on

the horse's mane. Her hair had blown loose and was blowing back into Frizzly's face and eyes. "Good morning glory!" he muttered to himself. "Gee, ain't women a conglomeration! And I've knowed men what actually married them so as they could have them around all the time—"
"Let me go, please, please!" pleaded the schoolman, beginning to cry. "I'm afraid, oh, I'm afraid

marm, beginning to cry. "I'm afraid, oh, I'm afraid of you."

"Oh, don't cry, for goodness sake, don't cry. Can't you see I ain't used to womens? Poor little scrub, you had ought to know I wouldn't hurt you for nothin'. I made up some beautiful arguments all along the road, but when I seen you, somehow it all went clear down to my feet, and my tongue wouldn't get hold on it no way. I was scared to spiders that I wouldn't get you, so I done the only sure way."

• The schoolmarm forgot to weep, to Frizzly's en-

couragent.

"Now, if you'll shet up a minute and behave peaceful, I'll try to tell you about it. You see, every Christmas before this we've been able to git off and ride down to Blizzard's Roost and git awful happy drunk." "Drunk on Christmas!" The schoolmarm was

scandalized. "Now, ain't it a heathen shame? But what you expect? Maybe a nice lady like you wouldn't understand how a bunch of roughs like us gits awful starv-in' hungry this time of year. You had oughter seen the fine Christmas feeds my ma could fetch up back there in Iowa. And, mind you, I ain't had a roarin' good meal for fourteen years—fourteen years. Now, I can stand any old kind of grub all the year round, but, by gosh, my stomick plumb refuses to eat burnt bacon and soggy spuds for Merry Christmas dinner. And that's what makes all the trouble. Everybody feels like they've got to treat Christmas kind of special, don't they? Well, being as we can't git no particular grub celebratin' for the day, we all jist gits special drunk."

He paused eloquently: the scheelmann considers

He paused eloquently; the schoolmarm ceased to pull his hair. Thus encouraged, he proceeded:

"Them old roughs is got their teeth all sharpened for a real good feed, and if I don't fetch the cook, why, gosh, woman, they might make me do all the cookin' forever," Frizzly moaned. "But I'll take you hack if you gor so. I'll take you clear back if you back, if you say so. I'll take you clear back, if you don't want to go."

Frizzly's tale was picturesque and pitiful, and the

little schoolmarm was "touch-hearted." She ceased

crying altogether, and looked back at Frizzly.

"The poor old roughs, I'm sorry for them; I only had some ribbon to run through an embroidery bag anyhow, and that can wait till New Year's. Yes, I'll go with you, your mouth looks so awful honest around

the corners."

"Gosh, gee, you little spark of heaven! I could hug you for that— No, I mean—I mean I'm awfully obliged, and you're the real dope. Excuse me, I didn't mean that first at all. I—I was just crazy excited. My, but them fellows will be niggled! They'll treat you like a chiny cup with flowers."

It had begun to grow very dark; the horse hobbled along in the uncertain snow and slipped on the pools of ice. There was nothing to be seen but gray snow and gray sky; there was no mark of a road, only Frizzly's faint trail of the morning showed them the way. The wind had risen and storm clouds hung over the earth in huge

and storm clouds hung over the earth in huge clots; a few warning flakes fell decidedly. "It's goin' to be a freak of a night. We'll stop at Snuggins's road house. You know Mrs. Snuggins, and I told her to expect you. told her to expect you. It'll be eleven before we get there. Ain't you cold? Well, by gosh, I bet your years is plumb freezin'. Didn't you have no vaccinator, a hood, a mosquito netting—you know, one of them there

things what goes over your head?"
"Yes, I had a veil, but it went when the

whorns blowing and coale who who was cutting up."

"Oh, you poor little smudge! Maybe I can join this here around you somewhere," and he began to tug at the knot in the silk handkerchief. The cow-punchers had tied it tight; they knew how he despised that "profane" shade of red.

"Wonder what them old crusts would think," he mused, "seein' their best broncho man a-knottin' up a lady's head. Maybe I've got some lady talent in me after all." Frizzly smiled, well contented with himself. He began to feel glad that Providence had chosen him for the task of "fetchin' the lady." "Now, is that better? Here, slip on this here fur coat, you ain't half wrapped up for this weather. It's a shame! I'm a plumb savage a-keepin' a little scrub like you up so late in the cold."

"Oh, that don't matter. You see, back in Missouri, my pa keeps a dairy, and lots of nights I was eleven o'clock a-milking."

"Oh, you poor little smudge! No wonder you starts toochis"."

"Oh, you poor little smudge! No wonder you starts teachin"." "Well, you see, I ain't a real teacher; but milking

twelve cows twicet a day was some hard in the winter, and I began to get petered out and pale, and I coughed all the time. So my mother she writes to Miss Jonesy, my aunt at Big Breezes, about me. You know what a terrible rep that school has; they couldn't get nobody to teach it. So my aunt, who has a pull, tells them trustees how smart I always was at school, so they decides to take me. It's a cinch that I can't pass them teacher exams next month, and then, of course, the county sup will ditch me." It ended in a trembling sigh

a trembling sigh.

"Oh, you poor little sugar! And then what will you do!"

"I figure that my pa still has them twelve cows. After all, I can't see much choice milking twelve gen-After all, I can't see much choice miking twelve gentle cows twicet a day and licking twelve tough kidstwicet a day. You know what those boys did? One morning when it was twenty below zero they stuffed the stovepipe full of rocks. I—I nearly froze."

"Gee-ee, I'd like to git hold of that bunch oncet, wouldn't I brand their hides, a-treatin' a poor little

thin, wore-out woman that-a-way! You know I went to school oncet. I got in the seventh grade. Never could see no sense in that there grammar. Miss Smack, she was that kind of a schoolmarm what all the time jags at a fellow. So one day I ties her up and lowers her into the well. Wouldn't have hurt the little cuss for nothin', just wanted to give her a good duckin'. Lord, but she was mad! So I quit. I've sure felt awful ashamed ever since, and, you know, I've always wanted to treat some schoolmarm very special to get even."

RIZZLY caught up his breath; he felt that he was

resulting too familiar for a mere cow-puncher.
"You sure you're warm enough?"
"Oh, yes. Say, I'm sorry I cut up like that at first, for I believe you're the only person in my whole life that ever cared whether I was warm enough or not."

For a long time they rode in silence, the wind howling and blowing great gulps of snow in their face. I was growing york cold; the little schoolmarm held.

was growing very cold; the little schoolmarm held her mittened hand over her nose. Frizzly, suffering without his fur coat, kept beating his arms against his body. Finally a blurred glow in the blackness announced Snuggins's road house; then, by way of conversation, Frizzly remarked:

"Yes, so do I—Missouri cows."
"Well, Montana cows is just as nice.

Excuse me for sayin' it so pert, but it's real solid comfort to meet a schoolmarm what knows all about cows; most of hem is so darn ignorant about everything.'

It was nearly ten on that bleak Christmas morning when Frizzly and the schoolmarm came in sight of the cow camp. The heavy snow of the night before had made traveling difficult as well as dangerous. Twice they lost the solid road, and the heavily loaded horse fell several times in the loose drifts, once upsetting both its riders.
"Was you scared?" asked Frizzly as

he helped her on the trembling horse while he wallowed along in two feet of

"Lord, no, I wasn't scared with you along." And Frizzly's heart squirmed and his breathing almost choked him, like it sometimes did when his cattle started to stampede.

IN SPITE of the weather the cowpunchers at the camp had risen at three. Part had gone hunting on skiis while the rest fed the cattle and washed their superfluous clothing, which was curled up on the fence, stiff and frozen. Buckskin, who for hours had been "drivin' his eyes" up the road, saw the pair approaching. He announced pompously:

"The interview is perambulating, me friends and country fellows."

Then the bachelors crawled to the top of the slippery snow of the bunkhouse. With cowhorns blowing and coal-oil cans beating, they seemed armed to the teeth with welcome.

As Frizzly and the schoolmarm came

within hearing, everyone shouted:

"Long live broiled chicken!" "Hurrah
for Christmas dinner!" "By jinks, for
roasted venison!" "By gosh, for the
little schoolmarm cook!"

Old Buckskin, the only one experienced enough with "ladies' sentiments,"

formed the reception committee.
"Say, ain't it cold!" he remarked timidly. "We was awful scared you wouldn't get here; the blizzard was so bad I couldn't see me own face across the road. Gosh, I believe you're all froze! Your years is clear blue. You poor little whistler, it's a plumb shame!"

With such words of comfort he led her into the kitchen, while the others went with Frizzly to the barn to con-gratulate him and to hear the details.

The dinner preparations were soon in full blast. All the cowboys liked the schoolmarm at the "first slick." For a while they stood off bashfully and nudged each other gleefully as the new savory odors broke loose in the kitchen. Then Gloomy Gilbert found courage to "fetch a bucket of water," and Bachy, seeing her laboring over a greasy pie

seeing her laboring over a greasy pie tin, offered to scour it with ashes. Blizzard boldly pinched a bit of icing off the cake, and when caught apologized that he couldn't help it, that "them smells made his appetite go ravin' crazy." crazy.

Then Frizzly Freddy, who had been standing aloof watching every move of the schoolmarm, grew rather apprehensive about his "stand-in," and suddenly conceived the brilliant idea of scrubbing

the kitchen.
"I can't remember its ever bein' scrubbed in my lifetime," he declared, "and I'd just like to see it all wet once."

Although the cow-puncher's methods of scrubbing were bold and reckless, they were not very efficient. First, he poured about ten bucketfuls of water on the floor, two in each corner and two in the middle; then he proceeded to soak it up with an old pair of pajamas—the sole leavings of an escaped tender-

Each cow-puncher that happened to pass the "scrub-maid" administered a friendly kick and made some appropri-

ate remark:
"Well, old boy, how's the water to-

day?"
"You had ought to try swimmin' on your back."

"You might use a life preserver, old

To each of these familiarities Frizzly's only reply was to try to trip the culprit, roll him in the water, and wash his face with the soapy pajamas.

Very much to the surprise of all, Frizzly's mad operations did not get the schoolmarm the least bit flurried. She stepped carefully about the room, her arms floured up to the elbows, carrying with her the delusive suggestion of mincemeat and cake, and stuffing and broiled sage hens, and baked potatoes and eyster stew, and hot biscuit and roast venison—all rolled into one deli-

cious, tightly packed little whiff.

It turned out to be the "bustingest roar of a dinner yet," as Blizzard declared. They ate and ate and ate— It turned out to be the "bustingest roar of a dinner yet," as Blizzard declared. They ate and ate and ate—and—ate, rising in their chairs to increase their reach, and making big swoops for the food. Nobody spoke until Blizzard, passing his fork for an-mark cook—she's the devil of an angel!"

other hunk of venison and a half pie,

learned that there was none to be had.
"Well, by gosh, what's become of it?"
he demanded threateningly; but nobody

"Well, anyhow, it was the best meal I ever et in my whole blamed life," declared Buckskin, "and I only ate twice too much."

After dinner the cowboys got out their pipes and began smoking, so the little schoolmarm, feeling herself su-perfluous, put on Frizzly's fur coat and

perfluous, put on Frizzly's full coat and softly stole out.

The long level of thin winter sunlight came in at the window and glowed for a while on the wet floor, then it coldly touched the roof, then slowly crept up to shine on the tops of the far-off hills. The fire crackled and died out, the teakettle sizzled and went dry, the grease on the chicken gravy turned cold, then on the chicken gravy turned cold, then white, then solid.

Slowly the cow-punchers began to come to with bellowing yawns and

creaking stretches. "Well," sighed Curly, "Merry Christmas is about over, boys. It'll take two hours to feed them beefs, and then somebody'll have to think about cookin' supper."
"Oh, I don't feel like workin' none,

I'm too sick," declared Toothpicks, pulling fiercely on his long beard, "and I can't never come down to ordinary grub I guess I'll take that school-

marm home."

"Not while I'm top of the ground you won't," thundered Buckskin. "Nobody'll jump my stand-in."

"And what about old Friz?" asked someone. "He brung her."

Everyone looked at the spot on the oilcloth that should have been occupied by

Frizzly's feet. It was clean and vacant.
"That blifferin', blasterin', darnigan
smarty," roared Buckskin. "To run off with our schoolmarm and talk to her all

with our schoolmarm and talk to her all by hisself."

"And jist for that,"—Slushy was buckling on his six-shooter,—"jist for that I'm a-goin' to hold up that old heart-splitter and ask the schoolmarm to leave me fetch her home."

"Not while I'm top of the ground!"

"Not if I can heat you to it you

"Not if I can beat you to it, you ain't!"

They all slung on their guns and rushed pell-mell through the door. Rushing around the barn they came to a sudden halt. There, on the fence of the cow pen, sat Frizzly and the schoolmarm.

"Gosh!" muttered Blizzard. they're stewin' up some josh to make a fool out of our pack. Let's pad-foot fool out of our pack. Let's pad-foot into that snow bank and listen. If I hears anything suspicious, I hollers 'damned biscuit,' then every fellow let loose his gun."

Then the stooping line of cow-punchers, each with his finger linked into the cartridge belt of the one ahead, crept like a huge loose caterpillar into the

white noiselessness of the snowdrift.

"Now, ain't them nice cows?" inquired Frizzly boldly.

"Just grand," chirped the school-

marm.

"Well, they's plumb full of yaller cream. Ain't this a fine ranch?"

"You bet it is!"

Would you

"You bet it is!"
"One third of it is mine. Would you like to—to—teach here?"
"Sure thing. You got a school here?"
"We're needin' a teacher in this district, I'm figurin'."
"What salary?" continued Miss Weeks

practically.

"ALL I got,"—gaspy. "You can see I don't know nothing about women, but I'd try to treat you good."
"Gosh!" sputtered the listening cowpunchers, "Gosh!"
The little schoolmarm looked at Friz-

zly searchingly, confidently. It set his heart to wiggling deliciously. "You mean—you mean—a school for just one?"

Frizzly's breath fairly choked in his throat. He wondered if he could ever

speak again.
"Yes, but he's—he's a awful darn

tough one!"—hoarsely, faintly.
"Don't you think?" she began, and her voice seemed to wobble too, "don't you think he could be civilized, say, with mince pie and table napkins and Scrip-ture readings?"

There was a short silence, in which the little schoolmarm rubbed her head cuddlingly against Frizzly's sleeve.

"Say, you know, I like them old roughs. It did me some good to see them enjoy that dinner, and I do love to cook. Can't we just live here and let me make pies for all of them every day?

The snowdrift exploded suddenly with great yell, while six big pistols off in the crisp Christmas air—while six



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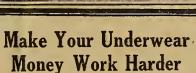
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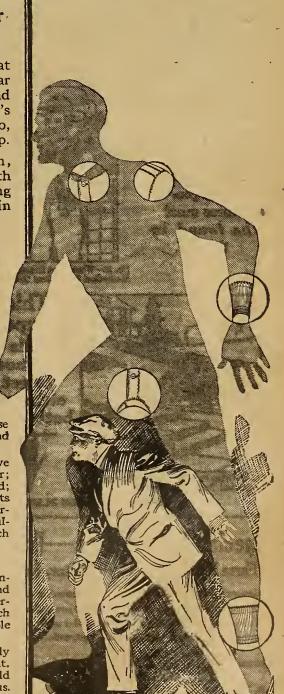
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Housewife's Club

Oblong Parcels Fit Best

By E. A. Wendt

"I NEEDED those things for this evening," groaned Mrs. Blank when the boy, returning from the mail box a hundry dred rods from the house, handed her a slip on which the rural carrier had written: "Have package that will not go in box. As you told me never to trouble to drive in, will bring again to-morrow."

That package contained articles much desired for that evening, when the eighteenth birthday of the daughter of the house was to be fittingly celebrated. "They were things I had asked my cousin in the next county to send over," explained Mrs. Blank. "She lives on a rural route and I supposed she would

rural route and I supposed she would wrap them so they could be left in the box. I suppose she did not think."

That is the trouble with a lot of us

when we are wrapping packages for delivery on rural routes.

when we are wrapping packages for delivery on rural routes.

If we are wrapping a parcel that will contain perhaps a little over 600 cubic inches, the chances are that we will wrap it as a square parcel or as one about 8x8x10 inches. In either case it will not enter the average R. F. D. box. If the package for Mrs. Blank had been wrapped so it was six inches square at the ends, giving it length rather than thickness, she would have received it on time.

The average R. F. D. box will accommodate a parcel that is not more than 6x6 inches on the ends, and up to 18 inches in length, besides a paper and couple of letters, but that is the limit.

Of course, with very large packages the risk of disappointment and inconvenience must be accepted, and should be guarded against by sending a card one day ahead of the parcel—not the same day, as is often done.

Forcing Winter Bulbs

By Ida D. Bennett

NEARLY all of the spring flowering bulbs force readily in the house and require far less skill in handling than the usual run of house plants—geraniums and like commonly seen flowers which so often disappoint one by refusing to bloom.

Like a great many this

Like a great many things we do, the easiest, simplest way is the best, and the less the bulbs are fussed with the better the results. Just get a good working idea of what is required and go to it with confidence in the result.

In a nutshell the mode of procedure is this: Good sound bulbs from the florists as early in the fall as they can be ob-

as early in the fall as they can be obtained; a sufficient number of narrow shallow window boxes or of pots to con-

tain them; good friable, sandy loam which will not pack, and plenty of drainwhich will not pack, and plenty of drainage. Plant one hyacinth or narcissus bulb to a four-inch pot, three to a six, setting them with the tip just below the surface, water well, and set away in a dark airy cellar for from two to three months for the different bulbs, or until top growth is well established. Tulips require more time than hyacinths and narcissi, and should be kept cool after bringing up-stairs until in bloom.

They are more effective and satisfactory in window boxes of one sort, and in any form make the most artistic and acceptable of Christmas gifts. Plant liberally for your friends, and especially for the invalid and shut-in. After blooming, if the bulbs are allowed to ripen naturally, they may be planted in the open ground the following fall, where they will bloom for years.

Recipes

TUTTI-FRUTTI RICE PUDDING-Cook rice in double boiler until well done. Remove from fire and stir in sugar and flavoring to taste, together with the juice from maraschino cherries (or other canned fruit juice) and a mixture of nuts, dates, cherries, and marshmallows, all chopped. Serve either hot or cold, and with or without plain or whipped cream. M. E. H., Michigan.

ORIENTAL SUNDAE CAKE—Rub together until smooth one cupful of sugar, butter size of a walnut and the yolk of one egg, together with a dash of salt. one egg, together with a dash of salt. Have ready one scant cupful of sweet milk, and beat in alternately with one and one-half cupfuls of flour, with which is sifted one tablespoonful of cornstarch and two teaspoonfuls of baking powder. Flavor with maple and bake in two layers. Fill with Oriental Cream, made as follows: Beat one egg until dry, and add, one at a time, three tablespoonfuls of thick, sweet cream, beating vigorously after each addition. When quite firm, sweeten to taste with crushed maple sugar, or use granulated sugar and flavoring with maple, and spread between layers of cake, sprinkling thickly with chopped nuts.

P. E. H., Montana.

CANDIED ORANGE PEEL-Remove peel from four oranges. Cover with cold water and bring to the boiling point. Cook until the peel is tender. Cut the peel in strips one-fourth to one-half inch wide. Boil two cupfuls of sugar in one cupful of water. Cook orange strips in syrup very slowly until syrup is absorbed. Drain on a waxed paper and sprinkle with fine granulated sugar.

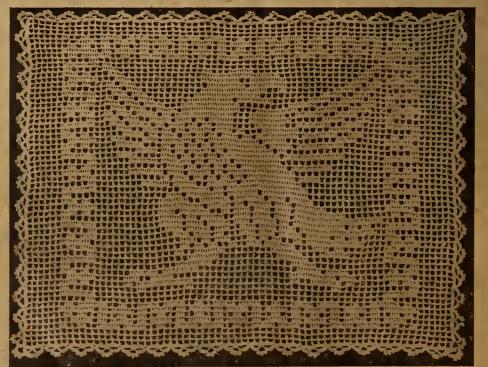
J. M., Ohio.

SODA BISCUITS—Sifter two thirds full of flour, one-fourth teaspoonful of soda, pinch of salt, one large tablespoonful of lard, two teaspoonfuls of baking powder, one cupful of sour milk or clabber. Sift dry ingredients, add lard, then add sour milk.

M. E. L., Oregon.

HAM LOAF—One and one-half pounds of fresh ham, ground fine, three eggs, salt and pepper to taste, one cupful of cracker crumbs, one cupful of boiling water. Mix well, form into two loaves, put in pan with a little boiling water, bake until brown. A. B. W., Illinois.

Crocheted Pillow Top



MADE with a bright lining, this pillow top in filet crochet is exceedingly attractive. For complete directions send four cents in stamps to the Fancy-Work Editor, Farm and Fireside, Springfield, Ohio.

Good Health Talks

By DR. DAVID E. SPAHR



HARDENING of the arteries is a chronic inflam-matory and degen-erative disease of the vascular system the vascular system, usually involving the arteries, sometimes the capilla-ries, seldom the

times the capillaries, seldom the veins, and sometimes all three. There is a thickening of the vessel walls, due to fibrous overgrowth, affecting all three coats, but mainly the intima of the vessel.

Causes: Loss of the normal elasticity due to old age, or from the degeneration caused by chronic intoxications, or overstretching by prolonged high arterial tension, the vessel becomes dilated. In order to restore the abnormally large caliber of the vessel, the intima thickens, causing their premature senility. It is more common in males. The principal causes of the disease are old age, gout, rheumatism, syphilis, alcohol and lead, muscular overwork, overeating, and the eruptive fevers. The disease usually becomes evident between forty and fifty-five years of age, and may appear in the early twenties or as late as sixty.

Symptoms: The arteries are thickened or atheromatous, and the pulse is the high tension pulse, and late in the

ened or atheromatous, and the pulse is the high tension pulse, and late in the disease there is cardiac dilatation. There is oppression, palpitation, dyspnœa on exertion. If dilatation ensues there will be edemas, dropsies, and diminished urine. In fact, there may be cardiac, renal, and cerebral symptoms.

Prognosis: Ultimately grave, although the general health may remain mode for many years.

good for many years.

Treatment: Medication is not beneficial in the early stages unless syphilis or malaria is present. The skin and bowels must be kept active. Alcohol is prohibited. A change from city to the country life and vice versa is beneficial. Mild massage and daily exercise is recommended.

Nasal Polyps

What will cure nasal ployps and prevent their return in the nose? What will cure catarrh? E. M., Colorado.

HAVE the polyps thoroughly removed with a nasal snare, and the pedicel cauterized with trichloracetic acid. This can only be done by a competent physician or, better still, a specialist.

For nasal catarrh use a douche made by adding two Seiler tablets to an ounce of hot water.

Chilblains, Boils, Croup

What to do for chilblains?
 How to treat boils, and what causes

3. How to relieve croup?
Mrs. H. M. B., California.

QUESTION 1. Apply the following ointment: Oxide zinc, 150 grains; carbolic acid, 8 grains; vaseline and lanoline of each, 225 grains. Mix. Apply to the feet night and morning as re-

Question 2. Boils are caused by improper diet, overwork, and nervous depression. The entrance of pression pression. The entrance of pus cocci into the skin is the essential or exciting cause. Saturate yourself with calcium sulphide by taking from one-half to three grains per day. Poultice and evacuate thoroughly when ripe.

Question 3. Give calcium iodide, or calcidin, one-third grain every fifteen minutes until relieved, for croup.

Winter Cough .

I am the mother of four children and live on a farm in the coal region of Indiana, and the coal gas seems to injure me. In the fall I take a cold and cough with expectoration of mucus, which lasts until good weather comes on in the spring so I can get out of doors. Mrs. H. M., Indiana.

You should seek a drier climate. You ought to stay out of doors a great deal during the day and make a tent out of your bedroom by taking out the window frames and tacking heavy muslin over the openings to keep out the rain, snow, and drafts. Take cod-liver oil and the hypophosphites, and live as much as possible on fresh eggs and cream. cream.

Injured Feet

I mashed both of my feet, and now the blood does not circulate and they are always cold. E. J. D., Ohio.

Massage them freely with hot sweet

The Use of Sour Milk in Baking

does not produce as uniform results nor make food of such fine quality as when pure cream of tartar baking powders like Royal or Dr. Price's are used.

There is often uncertainty with the antiquated use of soda and sour milk. When too much of either is used, or the milk is too acid, a bad taste is given to the food.

It is not necessary to use sour milk with Royal Baking Powder or with Dr. Price's Baking Powder as they are complete quick raising agents and food prepared with them

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and gray drums of Carbide, now number over 300,000.

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They are strong and simple in construction and under ordinary conditions last as long as a good building.

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The country home owners (mostly farmers) own special requirements—when you do, who buy and store and use all these blue it will be easy for you to understand why and gray drums of Carbide, now number Carbide lighting and cooking plants now outsell all others.

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Children's Corner

Tumble-Heels

By Fannie Wilder Brown

Part II

SHE climbed painfully back up the hill, dragging her broken sled forlornly, and went into the cooper's shop where her grandfather made barrels. He was not there, but a half-finished barrel spread its flaring staves about a little fire of glowing coals. She warmed her chilled fingers and toes, then helped herself to a new barrel head from the pile near his bench. near his bench.

Taking the barrel head to the brow of the hill and seating herself carefully upon it, away she went, whirling round and round, now this way and now that. It was impossible to steer at all. Before she knew what was happening she was away at the left of the coasting path, among the young fruit trees which her father had set out last spring. Crack-snap went one, and snap-crack

Crack-snap went one, and snap-crack another, cut off close down to the crust. Tumble-Heels on her barrel head flew away from them down the hill toward the rail fence. At length she managed to throw herself face downward on the crust. She found herself going head-first into the fence, so spread out her arms and legs to lessen her speed and to steer herself away from an angle of the intersecting rails

intersecting rails.

She barely escaped the corner, slipping under a cross-rail just beyond, and plunging into the ice-bound bed of the little brook on the farther side. The ice snapped and cracked as she floundered about, letting the freezing water up onto its surface, and breaking through at every step she took when she had regained her feet. Fortunately the brook was shallow, but Tumble-Heels

brook was shallow, but Tumble-Heels was wet to the skin.

The other children had seen the last part of her flight, and hurried to meet her. Their shouts brought the whole family out. Louise rushed back and brought her father's buffalo overcoat to wrap about Tumble-Heels. Father and Dick, one on each side, helped her along as fast as they could. The four children all talked at once, trying to tell Mother and Grandma what had happened, and Aunt Susan brought up the rear of the procession, swinging a flatiron she had procession, swinging a flatiron she had been using when the excitement began, and had not stopped to put down when

"But you'll have to pay for those two pear trees, Josephine," Father said as he sat by her bed after the had finished

his work at the barn that evening.

"Two dollars and a half apiece for the trees, and a dollar more for express charges. Six dollars is a great deal for you to earn and save, I know; but you

must have your lesson, Josephine."

It was the first time, so far as she could remember, that her father ever had called her Josephine. Poor Tumble-Heels! Money was scarce on the farm, and opportunities to earn it were few. But she was as well as ever the next day, and so she set about her long task. She watched the hens' nests and brought in eggs, and Mother let her sell all she could find, except what were needed for family use, while the hens were laying so few. Later she raised a brood of chickens and sold them. She nursed an early lamb in the kitchen and woodshed until he was big enough to live in the sheep barn, and she sold him woodshed until he was big enough to live in the sheep barn, and she sold him in the fall. She wore her old clothes uncomplainingly until they were altogether too small and too shabby for her to wear any longer. And she did errands at the village, four miles away, whenever anyone wished to have her harness old Nancy-to the pung and drive over there—but that was fun.

Now and then some hazardous plan would arouse her love of adventure, but

would arouse her love of adventure, but the thought "barrel head" was sure to intrude before she could mature any plan. Again she would feel herself whirling and whizzing on that wild and perilous flight, again hear the crack and snap of her father's young fruit trees, and the plunge through the ice into the freezing stream. Then she would feel the chill, the numbness and the fear, and after that hear her father's stern "Josephine."

It was not until the following Thanks-It was not until the following Thanks-giving that he gave her a receipt show-ing that she had paid her debt. Then at last, with a sudden unexpected glow, she felt that the hard lesson had been well worth learning, after all. The re-ceipt was made out, "To my daughter Josephine, once called Tumble-Heels, but now my dear and careful helper."

New Puzzles

Measuring Oil

"Here is a clever little problem," said the oilman. "In emptying that barrel of 31½ gallons, I drew five times as much oil with the three-quart measure as with the two-quart. "The only other measure I used was the five-quart, and since I drew only full measures who can tell me just how

measures who can tell me just how much oil I drew with each of the three measures?"

Answers to Puzzles

Puzzles Printed Last Issne

Around the Turnip Patch

The March hare, the ground hog, and The March hare, the ground hog, and the field mouse came together in their race at a point eight ninths of the distance around the turnip patch. The remaining distance, 250 feet, being one ninth of the complete distance, the circumference of the patch must have been 2,250 feet. Therefore the swiftest runner had raced 2,000 feet and twice around in addition, or 6,500 feet altogether.



When Uncle Peleg stuck his stump through a knot hole in the bridge over

the tannery creek early in the fall



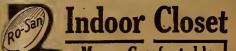




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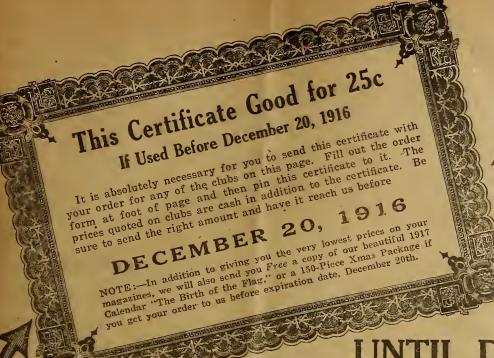
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OUR 1917 CALENDAR

We have selected a calendar of unusual beauty this season, one that is quite in keeping with the times. With war in the atmosphere everywhere, what could be more appropriate than "The Birth of the Flag," the subject we have selected? This beautiful picture shows the making of the original flag in the little sewing room of Betsy Ross. The delicate colors of the original picture are faithfully reproduced. The mounting is gray green and the calendar pad is large and easily read.

'You can have your choice of the Calendar or our 150-Piece Xmas Package, as a Good-Will Gift, in addition to any other offer, if you order before December 20th.



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Vol. 40

Springfield, Ohio, Saturday, December 16, 1916

No. 6

The Blue Envelope

A Love Story of an Heiress Who Really Went to Work

By SOPHIE KERR

PART I

LWAYS before this it had been off to boarding school in the fall school in the fall for me after a summer spent traveling, or camping, or doing something away from home. I call it my home, though it was Mrs. Alexander's house, and she was no kin to me, but just a childless woman, a distant connection of my guardian, who had asked if she might not take care of me when my dear father and mother died. I was a most forlorn orphan, I had nobody but my guardian, Mr. Parsons—I called him Uncle Bob—and Mrs. Alexander. The gentlest woman, Mrs. Alex! And the kindest, and the most generous. Alex! And the kindest, and the most generous. In spite of all the money in father's estate, she wouldn't let me pay for anything except my own personal things. She always said she had longed for a daughter, and that it made her so happy to have me with

longed for a daughter, and that it made her so happy to have me with her that money would spoil it. I was glad when I knew we were to stay there all winter, and when Mrs. Alex began talking about my début I could have shouted for joy. I visioned silver slippers and bouquets of pink roses, and crowds of admiring men who would all fall in love with me. And Mrs. Alex was as excited as I. She said it made her live her own girlhood all over again. Then came the letter that called Mrs. Alex to Maine to take care of her sister who had typhoid, and, since there was no knowing how long she'd have to stay, the only thing to do seemed to close the house again and turn it over to the caretaker, but that left me to be disposed of. Mrs. Alex was so distracted with packing and giving orders and wondering what would be the best thing to do with me that she nearly cried with relief when Helen and Clare Morrison came rushing in and said that their mother wanted me to come and stay with them for as long as Mrs. Alex would be away. Mrs. Alex hesitated, for she thinks the Morrisons are all rather frisky, but finally thinks the Morrisons are all rather frisky, but finally

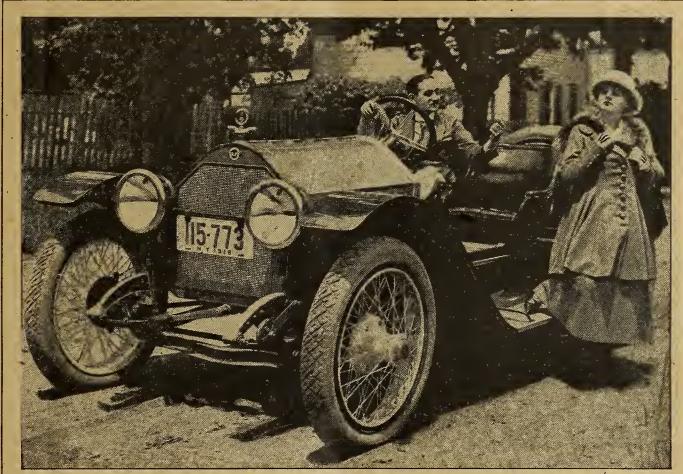
thinks the Morrisons are all ratner frisky, but many she said:

"You can't get into a great deal of mischief in a month or two, Leslie, can you?" And then we both laughed. "Besides," she went on, "Mr. Parsons is here, and what is a guardian for if not to guard occasionally?" But just before she left she put her arms around me and said: "My dear, I want to say just one thing—if you're uncertain about anything, don't do it! That's the safest rule of life." And then she gave me a kiss and told me to write to her very she gave me a kiss and told me to write to her very often and tell her all about my good times at the Morrisons.

IT WAS heaps of fun at the Morrisons. Mrs. Morrison is very gay, and Helen and Clare are older than I, and people simply rush to their house, young people and old people, fat people and thin people, nice people and some who are—but it's horrid for me to It was so different from the way Mrs. Alex and I live that I adored it. I wore an evening dress every night to dinner and did my hair in a new way every week. (Thank heaven my hair is curly!)

Of all the boys who came to see Clare and Helen,

the one they were crazy about was Ranny Heeth. He was the oldest of the crowd—a regular man of the world. He had the dearest little red racing car, and he smoked cigarettes, and he played tennis and golf, and danced and did everything just a little bit better than anyone else. Everyone said he was "wild," but no one minded in the Morrison crowd. And he had a horrid family, a dreadful old politician father who was some sort of boss and was al-



"I utterly detest and despise you, Randall Heeth, and I'll walk back to town rather than ride with you"

ways talked about when reformers made campaign speeches, and his mother and sisters were the most showy vulgar sort of people. The Morrisons said that Ranny was different from his family, and he certainly was.

IT WAS just four weeks to the day I met him when Randall Heeth proposed to me. I was so happy. It may sound foolish to say so, but honestly, with his fair hair and his nice red-brown summer tan, he looked exactly like Prince Charming in the fairy tale. He said he had cared everything for me from the first instant he saw me. He urged me to set the wedding day very, very soon, but of course I couldn't. wedding day very, very soon, but of course I couldn't say anything very definite with Mrs. Alex away. I didn't write to Mrs. Alex about it, for, somehow, I felt that she'd better hear it from my own lips. I knew she'd like Ranny instantly if she saw him, for no one could help it, but I felt somehow that she might get some sort of a foolish prejudice against him if I tried to tell her about him in a letter. Anyway, I told Ranny that I'd go down and tell Uncle

Bob and see what he thought.

It was a heavenly October afternoon when I went down to see Uncle Bob. He is not really my uncle, but he was my dear father's closest friend, and he is

but he was my dear father's closest friend, and he is my trustee and guardian and a darling old thing, though very, very old-fashioned in his notions, and sometimes very grouchy. Still, with a little wheedling I can almost always bring him around.

Ranny took me down to Uncle Bob's office in his car, and said he'd wait for me and I must not be long. But provokingly enough there was someone in the inner office. I sat down in the outer office with Miss Winch, who is Uncle Bob's secretary and a quiet girl, who always wears the plainest shirt waists and skirts. She was taking notes from a great pile of books. I fidgeted around and looked at my wrist watch and fingered my lovely white jade my wrist watch and fingered my lovely white jade pendant that I'd had put on a scarlet silk cord, and pulled my fur about and, finally, I said to Miss

"It's forever and ever amen to wait, isn't it?"
She looked up and smiled comfortingly, and said:
"Oh, it's only old Mr. Johnston—he never stays very long."

And then the voices in the inner office stopped and Uncle Bob and old Mr. Johnston came out. I got up and bowed distantly to Uncle Bob.
"How do you do, Mr. Parsons," I said. "I've come

to see you on a matter of grave importance." Just like a client, you

Just like a client, you know.

Uncle Bob looked tickled, and yet grave too. He ushered me back into the inner office at once.

"I'm glad you came to-day, Leslie," he said.
"I was just on the point of sending for you. I have something to tell you which I am afraid you will not find very pleasant."

I thought he meant the bill for my fur—it was an extravagance.

"Oh, Uncle Bob," I cried, "I know it was an awful price, but do look at it—it's the loveliest silver fox! They said at the shop it was the finest glain they."

liest silver fox! They said at the shop it was the finest skin they'd had in stock for years. I'll be very economical all the rest of the month to make up."

"I know all about your promises of economy," said Uncle Bob, with a quite unnecessary emphasis. "You don't know the first letter of the word. However, I didn't want to speak about the fur. Sit down, Leslie, and listen, please. You know that when your father died he made me e, with power to admin-

the sole trustee of the estate, with power to administer it as I saw fit, and also to have full and complete guardianship over you. Your father, as you also know, left certain plans for-your education which I have endeavored to carry out. In two days you will be eighteen, and now we come to the gist of the be eighteen—and now we come to the gist of the matter. Your father wished you, at the age of eighteen, provided you were not engaged to be married, to een, provided you were not engaged to be married, to learn some wage-earning profession or occupation, and become self-supporting for a period of not less than two years."

I sat still and tried to comprehend it. The more I thought about it the stranger it seemed to me. "Father must—must have had some reason for this, mustn't he, Uncle Bob?" I asked at last.

Uncle Bob got up and looked out of the window. He loved father so dearly that he never can talk about him without being affected by it.

about him without being affected by it.

"Your father," he began slowly, "wanted you to know something more of life than just—froth. He wanted you to—to understand the people who must make their own way and who shoulder hard responsibilities. He thought that you should learn to do as they do. He wanted you to—I use his own words—'eat bread you have earned, to know how much you are worth to the world in actual dollars and cents, to be among the people who work, not as an observer, but as a fellow worker.' That was his idea, and I put it before you just as he expressed it."

THERE was another silence. Then I remembered Ranny and the reason why I had come down to Uncle Bob's office—I'd really almost forgotten it.

"You—you haven't asked me why I came to see you to-day," I said, not knowing exactly how to tell him. "I—I came to tell you—well—it makes father's and I line of the same and the same and the same are same to tell you. plan impossible-for you see, Uncle Bob, I am en-

Uncle Bob swung round from the window as if I had hit him with something. He was all the severe

guardian now.
"Engaged," he snapped. "A child like you! And to whom?" It was always very much easier for me to talk to

him when he is snappish than when he is serious and sweet.
"If you'll come to the window and stand on your

tippy toes and look down, you can just see the top of his head," I said naughtily, "for he's waiting for me in his car. It's—Ranny Heeth." [CONTINUED ON PAGE 19]

Top-Notch Achievements

What Happens When You Count on Getting Prize Results

By C. B. PARKS

OME persons have the idea that "gumption" means sense. But it does not mean this. It means making use of one's brains. Many persons are born with plenty of sense, but they will never have any gumption. Probably in no occupation is gumption needed so much as in farming. On a farm a man is not only his own boss, but his success depends on himself more than in any other occupation. other occupation.

Perhaps he had lots and lots of sense, but he lacked the gumption to apply his

the gumption to apply his sense properly.

But the greatest lack of gumption that I know of is to be found in the city man who gets the country bug in his head while working in a hot shop under a bad-tempered boss.

"Never mind," this fellow will tell you. "Just you wait and see. I am going to save my money and buy a farm, so I can make my own way and be my own boss. I am going out in God's country and enjoy life."

This man sends for all

enjoy life."

This man sends for all the government bulletins, subscribes for several farm papers, and gets thoroughly saturated with farming while he saves his money. He reads in one paper of a boy who raises 100 bushels of corn to the acre, of a girl who cans several thousand cans of vegetables, and of a woman who raises \$600 worth of poultry in one year. Therefore, if one boy can raise 100 bushels of corn on one acre, a city man can raise that much, so he need only plant two and a half acres. Yes, that will be 250 bushels, which will be plenty for his use until next corn time. If a girl cans all that food, his wife will be able to do the same amount of work, so with plenty of corn and vegetables the winter supply of food need not trouble him, and all that chicken money can go toward improvements on the farm.

Oh, yes, there was no earthly way for him to fail. He really was right about country life being an ideal life, and he proved he had sense by saving his money to buy a farm instead of renting one. He also proved he had sense when he read what others were doing on other farms. But he didn't have gumption enough to know that the boy who raised 100 bushels of corn on

other farms. But he didn't have gumption enough to know that the boy who raised 100 bushels of corn on one acre tended that one acre only, perhaps giving all his time and money to producing that 100 bushels, whereas the city man would have all his other farm work to do, keep up his roads, repair his buildings, and do a thousand other things that never enter his

Also, he is giving his wife two women's jobs—the one of canning 1,000 cans of vegetables and one of raising and selling \$600 worth of poultry. All this besides her general housework. But with the feelly several his paraway have a form in his head he finally saves his money, buys a farm, and then if his wife only manages to can up 500 cans of food he wonders why she cannot do the work one girl did in such and such a farm paper. If she only sells \$60 worth of the \$600 worth of poultry, he is all crissy-cross, and knows farming will be a failure

if she doesn't take any more interest in it than that. Then later on when he gathers his little old 50 bushels of corn an acre he begins to get a grouch. His farm is poor, the seed was poor, the weather was not corn weather, every excuse under the sun this man can give. When some neighbor tells him he has done fine for the first year, he tells something he has read about the 100 bushels an acre and the 1,000 cans

In a few years he very disgustedly gives up his farm and hikes back to the city, his beautiful dreams of freedom sweated away trying to work out his own salvation by another person's pattern. money, he had the sense, and he had the theory, but he did not have the gumption to back up these three very necessary items to make his dreams materialize. All theories should be read first, then thought out, and then used with a little gumption. That is, twist

and then used with a little gumption. That is, twist your theories around to suit your own individual needs, your own little farm.

The man who is born on the farm, many times takes his father's way of farming, and can never get out of it. In lots of cases this was the proper way to do fifty years ago, but methods and farming have changed, and only an old fogy will stick to one way, even after having it proved to him that there is a much easier and better way of doing the same job. It reminds me very much of a path that led to a spring on a farm I once visited. I was told to follow the path, and when I got to the spring and looked back I saw this path made the way nearly a third longer, although a perfectly straight path could have been made directly to the house. I asked the reason of this when I went back to the house, and was told that the whole place on one side was grown up in blackberry bushes when the family had first moved

his success depends on himself more than in any other occupation.

If a man works in an office, in a shop of any kind, or as a laborer, he is told what time to start to work, what time to quit, and what to do while at work; in fact, the sense and gumption are supplied by the men higher up, while the real worker only supplies the mechanical movements of his hands.

Day after day he does this until he seldom has to use his brains at all, and gumption can be lacking entirely. Not so with the farmer. He arouses himself in the morning, stops himself at night, and three hundred and sixty-five days in the year he has different jobs that he, and he only, has to supply the brains for, and for every job the farmer has to have a big goh of gumption if he would be successful.

Take a good many farmers of your acquaintance who rent or even own their farms, but year after year their farms run down, debt overtakes them, and although you can trace no cause for their failure, the first thing you know these farmers have left the farms and have gone to work by the day.

You might ask:

"Why did Joe Waters sell out? He always seemed to have plenty of sense."

Perhaps he had lots and lots of sense, but he lacked HEN I look back down the hard-beaten and rutty path of my career as a farmer, I often wonder how many brothers of the soil allowed themselves to get into a groove as I did, and, if so, what gave them the incentive to get out.

About twenty-five years ago I bought my father's farm and started in business for myself. As we now know, farming at that time was looked upon in a different light from what it is nowadays. A man with little education was supposed to be fitted for nothing but the farm.

With only a district-school education I started farming with no pride in my calling. While I may have had some independent ideas of my own when I started, I soon found myself jogging along at about the same pace that my neighbors were doing. I worked as hard as did others who had a family to rear, land to clear, and interest to pay. There were privations which we do not have to-day.

But what strikes me most forcibly in looking back was the imperfect organization of the farm schedule and the lack of business methods. No accounts were kept either of what we sold or what we bought. We went once a week to the country store with our butter. For this we were given credit, oftentimes not even asking the price and seldom the weight. The things we bought were charged, and once a year a settlement was made with the merchant.

If we had more butter than our purchases amounted to we were paid the balance in cash, and if

Later on when he gathers his little old 50 bushels of corn an acre, he begins to get a great big grouch. Average soil and ordinary methods seldom give the high yields expected

on this farm, and the path was just around the edge of the bushes. The bushes had been cut away long enough to leave absolutely no trace of them, but still these farm persons went around the place where the bushes had been. These persons were all smart, sen-sible human beings, but they had no gumption.

Sure of Fertility

By L. A. MACCUMBER

HEN I began farming I was handicapped by a mortgage on the farm which came to me through inheritance. In addition, I had to go further in debt for a team and farming implements. All farm produce was at a low value on our local markets-No. 1 rye as low as 17 cents a bushel, oats 20 cents, wheat 35 cents to 40 cents, and corn 15 cents a bushel.

Hay would scarcely sell at any price. When there was any sale in a small way, from \$3 to \$5 a ton was considered a good price. I raised nearly everything we used for food, but it was just "nip and tuck" to pay the interest on that mortgage. Then the raising of potatoes. Had I understood cultivating, handling, and marketing potatoes I could have cleared \$2,000 a year for five years or more. Instead, I raised only a year for five years or more. Instead, I raised only a few bushels, except one season when I raised a big crop that sold at \$1 a bushel. Well, that wiped out the mortgage.

Potatoes gradually declined in price until they got down for several seasons in succession to 18 cents a bushel. One spring I threw out hundreds of bushels of fine potatoes because they went down to 6 cents a bushel. After that I quit raising potatoes, but I did not quit soon enough. The potatoes had so depleted the land of fertility that I could not raise any kind of satisfactory crop—not even enough feed for the team and family cow. There was nothing else in view but to mortgage in order to live.

At my wife's suggestion I then began to rent land and let our own farm lie idle. My wife raised poul-try, fruit, and garden truck for the market. All roughage from my share of rent was used for feed and bedding. Gradually I increased my live stock. In summer I rented pasture, as that was the only way I could save feed for stock in winter. For several seasons I continued to use the manure judi-

ciously. To-day I am happy to say I have a bunch of live stock. I am continually building soil fertility. We have a fine flock of rose-comb Rhode Island Reds of strictly laying strain, which is bringing in money the year around. There is a profit in the bredto-lay class of poultry. The best pure-bred stock is none too good for our farm.

As we stand to-day, that last mortgage does not cause us any loss of sleep, as our farm is increasing in fertility and value. I now raise oats and seed with clover with good success. I sow vetch and rye the last of August with a view of getting a mass of green before freezing sets in, and when the vetch is in bloom it is such a heavy tangle I can hardly get through it. I turn it under, drag the land, level and roll. I then spread what manure I have, and in this way always feel confident of a fair crop of whatever I sow.

Too Easy Going

By J. D. KING

merchant.

If we had more butter than our purchases amounted to we were paid the balance in cash, and if the balance should be in the merchant's favor—as was often the case—we made it up to him.

One day when in town I saw on the billboard a notice that a farmers' institute was to be held that evening in the town hall. Out of curiosity I drove back to the meeting together with my son.

When I came away from that institute I carried with me a determination to get "down to business" and feel a sense of dignity for the great work I was doing for my country. I co-operated with some others who were interested and we organized a grange. We got our boys and girls together, had debates, and gave prizes for the best essays on farm and home improvement. At this time my son had finished high school, and expressed his desire to go to the agricultural college. This he did the next fall. When my son finished college, we revised our methods in the dairy by keeping a daily record of each cow, both of the feed she consumed and the milk

eping a daily each cow, both of the feed she consumed and the milk she gave in return. Twice a month we tested each she gave in return. Twice a mo cow's milk with a Babcock tester.

If a cow in normal condition was not paying for her feed and care she was replaced by one that would. A daily composite sample is taken of the milk before it is hauled to the creamery. Thus by testing twice a month and computing the average test with the total amount of milk for that month we know very closely what our next check is going to be.

Payment for all feed and produce bought is made

by check. By this method we avoid mistakes in keeping accounts. We also invested in a set of platform scales so that when we take a load of produce to town we know the amount, also we can weigh our return load to see if it checks with the merchant's weight. While I do believe it a good practice for a farmer to patronize his home market, he should not confine himself to this policy. If there is any class that deserves all that is coming to them it is the farmers. If he can ship his eggs to the city and realize 20 cents a dozen more than he can get at home, as I have done, he should do so by all means.

I might go on and tell how the telephone and the

R. F. D., two great rural community benefits, were introduced wholly by the influence of the people in a desire for social improvement, how we are selecting our seed potatoes by keeping the best hills for seed, how the fields are gradually being enlarged for the accommodation of labor-saving machinery and crop rotations, how the old orchard has been pruned, and then sprayed to destroy injurious insects.

The Porker's Last Squeal

Blazing the Way for the Young Butcher on the Farm

By ANDREW M. PATERSON

OGS, before they are butchered, should be taken off feed for at least twenty-four hours and kept in a quiet place with plenty of fresh water to drink. If the animal's body is hit or bruised it will cause a bruise, on the carcass which will make the carcass unattractive and cause the meat to spoil very quickly. Excitement of any kind, just previous to killing, which causes a rise in temperature in the animal will have an injurious effect upon the meat. As most butchering on the farm is done in the open, it is wise to select, a dry, convenient place in which to do the work and hang up the carcass.

farm is done in the open, it is wise to select a dry, convenient place in which to do the work and hang up the carcass.

For rapid and neat work at hog-killing time the butchering crew should be equipped with knives, hog hook, scrapers, and a convenient place for working. A barrel makes a good vessel in animal if set at the proper slant against a platform on which to do the scraping.

Hogs should not be stunned before sticking, although it is often done. Where labor is scarce the hog may be hung up by the hind leg for sticking. The better way, however, is to lay the animal on its back, where it is held until stuck. Two mencan handle a large hog if they use the proper methods. By reaching under the hog and grasping the opposite legs they can turn a heavy hog on its back very easily. Then one man standing astride the hog, with his feet close against its sides and holding its front legs, can easily control it while the other does the sticking. The knife, narrow, straight-bladed, eight inches long, is inserted into the hog's throat just in front of the breastbone. The point is directed toward the root of the tail and held exactly in line with the backbone. This is necessary to avoid running in between the ribs and the shoulder, causing the blood to settle there, with consequent waste in trimming or a poorly keeping shoulder. When the knife has been run into the neck six to eight inches, the depth depending on the size of the hog, it should be given a quick turn to one side and withdrawn. The arteries that are to

into the neck six to eight inches, the depth depending on the size of the hog, it should be given a quick turn to one side and withdrawn. The arteries that are to be cut run close together just inside the breastbone and will be cut when the knife is turned, provided it is sharp on both sides of the point.

Cleaning the Carcass

WATER for scalding should be heated to a temperature of 200 to 212 degrees F. Where it must be heated in the house, as is often the case, it should be boiling when removed from the stove. If put in a cold barrel it will then be about the right temperature when the hog is ready to be scalded. It may not be out of place to state that the water should be nearly boiling before the hog is killed, but should not be removed from the fire until the hog is nearly dead. At the time the hog is scalded the water should be at a temperature of 185 to 195 degrees. Water at 165 to 175 degrees will scald a hog, but more time will be required, and the results are hardly as satisfactory. If the water is too hot the hair is likely to set, causing even more trouble than if too cold. It is not expected that a thermometer will always be used, but if the water is boiling when taken from the stove and put into a cold barrel the temperature will be about right. If the barrel is hot, as it would be ordinarily for the second hog scalded, add a half pail of cold water. By testing the water with the finger each time, one can soon become expert in gauging the temperature. A small shov-

each time, one can soon become expert in gauging the temperature. A small shovelful of hard-wood ashes added to the water aids materially in removing the scurf from the body, though it has no effect in loosening the hair. Concentrated lye has the same effect.

The hog should not be scalded before life is extinct, or the blood in the small blood vessels near the surface of the skin will be seeded a giving a golddick tings to blood vessels near the surface of the skin will be cooked, giving a reddish tinge to the carcass. While being scalded the hog should be kept moving constantly to avoid cooking the skin. Occasionally it should be drawn out of the water to air, when the hair may be "tried." As soon as hair and scurf slip easily from the surface, scalding is complete. If it is suspected that the water is too hot, scald suspected that the water is too hot, scald the hind end first; if too cold, the front end, in order to always get a good scald on the head, which is difficult to clean.

When the hair starts readily, remove the animal from the water and begin scraping. The head and feet should be cleaned first, as they cool quickly and do not clean so easily when cold. The head can best be cleaned with a small round tool called a candlestick scraper. The hands and a knife will answer where such a scraper is not to be had. The such a scraper is not to be had. The feet and legs are easily cleaned by grasping them firmly with the hands and twisting around and back. Clean the body by pulling out the long bristles by hand and removing the scurf and fine hair with a scraper, a long corn knife, or other tool. Rinse over the entire carcass with hot water, then shave it with a sharp knife. Clean the ears and nose thoroughly, and the feet clear to the hoofs. Raise the gambrel cords, insert the stick, and hang up the hog. Wash down with hot water, again shave over any unfinished patches, and rinse with cold water.

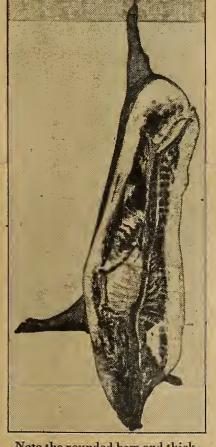
Occasionally a hog is killed that is too large to scald in a barrel. If it is covered thickly with blankets or with sacks containing a little bran, and hot water poured over it, the hair will be loosened readily. In some localities hogs are skinned, but scalding is usually considered more satisfactory.



The scraping and cleaning platform should be just the right height. Much depends on quick, effective work immediately after the scald to insure a clean, bright carcass

Pork is unlike beef and mutton in that it should be cut just as soon as it is cooled through. If the carcass has not been split to aid quick cooling it should be laid on the block and the head removed an inch back of the ears. Next remove the shoulders between the fourth and fifth ribs and cut off the hams about two inches in front of the pelvic bones. Split the hams and trim to a smooth rounded piece. The feet may be removed at the hock joints, but sawing them off a couple of inches above the hock is recommended, as the hams will then pack much closer in the barrel. Split the middle piece with a saw or ax, and remove the leaf if this was not done when the hog was dressed. This may be easily accomplished by starting the leaf at the front end and peeling it backward with the fingers. The kidney comes out with the fat. Take out the loin and sparerib, leaving the lean meat found along the back on the loin, which may be used fresh as chops or for roasting. When cutting the meat from the ribs, the separation should be made as close to the ribs as

This long bacon type suggests choice breakfast cuts



Note the rounded ham and thicker fat of the lard hog

possible. This much improves the quality of the bacon. Cut the side lengthwise into three evenly sized strips or, if to be cured and smoked, into two pieces, the upper one third—called the back strip—for salt pork or lard, and the lower two thirds—called the bacon strip—for bacon. The edges should always be trimmed up square, and all scraggy parts used for sausage or lard. Take the ribs and neckbones out of the shoulder and trim it down to the top of the shoulder blade. Trim off all bloody spots and neck meat. Remove the foot above the knee joint. Split the head through the center and then into squarters. Later lean trimmings are made into sausage; fat trimmings into lard. The feet, snout, and ears are pickled, and the head boiled for head cheese.

Buying a Typewriter

By P. C. GROSE

FEW years ago when a farmer's sons grew up and wanted a place of their own, they simply went a little farther west and "took up" a piece of land—brand-new and at little cost. But now the West is virtually taken up. To-day the sons who wish to be farmers cannot leave the old place and take up new ones of their own, for there are none left to take up. Consequently, they must remain on the farms their fathers already possess, and by newer and more

possess, and by newer and more efficient methods do a bigger business with the same number

A few years ago one seldom saw a typewriter advertised in a farm paper. Now they are among the regular advertise-ments. What does it indicate? Simply that the busienss of farming is speedily adopting the up-to-date methods of other businesses.

As an institute speaker I have observed that the young men of a community grow keenly alert and interested on the subject of up-to-date business methods in farm practice, while the older men, as a rule, rather treat the subject with disdain. The young farmers are looking forward, eagerly seeking those things that will be the aids to moneymaking in the future; the older men cannot, it seems, look otherwise than backward at the old "toiling and moiling" methods that made them their money. ttach more to management, men-

The younger men attach more to management, mental toil, and keen, twentieth-century business methods than do their elders. As a typewriter has become an essential of modern business correspondence, and as that is one of the vital elements of business methods of to-day, I am addressing this article to those young farmers who would like to add a typewriter to their farm equipment

farmers who would like to add a typewriter to their farm equipment.

In the first place, let it be emphasized that to operate a typewriter for a small amount of correspendence such as is connected with the ordinary farm does not demand special training, as is so generally supposed. Of course, to become an adept stenographer, such a training is necessary; but the average person can soon operate a typewriter much more rapidly than he can write with a pen, and use nothing more than his two index fingers. In the second place, it should be understood that there is a wide range in the kinds and prices of machines. The older types were constructed so that the writing was not visible as it was written; they are called the old "blind" styles. All the newer models are visible machines, having the writing visible as it is written. There is no difference in the finished writing, the only advantage being in seeing it as it is written.

Several years ago I purchased an old blind machine. It cost me \$20, express charges included. I used it a great deal all these years, and it is still doing good service. Not long ago I purchased a standard make of the visible style. It has the back spacer, tabulator, two colored the back spacer, tabulator, two-colored ribbon device, margin release, etc. A later model of the same machine differs from the one I have, by possessing a few more characters which are quite unnecessary for ordinary writing.

One of the principal advantages of a typewriter for business correspondence is the ability to make one or more carbon copies of all correspondence. By keeping a file of these copies I can instantly refer

to what I have previously written, and when the letters were sent.

There are concerns that make a busi-. ness of rebuilding used typewriters. All the worn parts of the old machine are replaced with new ones. A rebuilt machine, while not as good as new, is usually a bargain for its cost. These concerns will send a sample of the writing the machine does. Also, most of these firms allow the numbers reversely these firms allow the purchaser several days' trial usage, and if unsatisfactory he need not keep it. Such machines can be purchased at prices ranging from \$15 up to that of a new model of one of the standard makes, which is in most cases

The editor of FARM AND FIRESIDE will quite willingly direct a reader to firms supplying the various lines and types of

machines.



Neōl



From the wooden rake to the modern

type of hay-loader is a far step.

Yet it is no greater than that between the old-fashioned leather sole and Neolin, the modern sole.

For between Neōlin and the leather tread is exactly the difference between something which wears long and something whose wear you cannot count

Neolin! It is a new sole material created by Science for wear. Wear quality that will stand under the roughest work, and over the roughest road. Wear quality that has tied to it water-proof-quality, for sloppy cow-shed or miry field.

Water-proof-quality that is in turn tied to flexibility for full, good measure!

That is why Neölin is called the natural tread when it is not called the tireless tread; Neolin is foot-resting and fatiguesaving right through the working day. And Neolin looks, not even the womenfolk can question.

Neolin comes for men, women and children. Retailers and shoe repairers have Neōlin or can get it at no. added cost to you; but beware of imitations. Better mark that mark; stamp it on your memory: Neolin-

-the trade symbol for a changeless quality product of

The Goodyear Tire & Rubber Company Akron, Ohio

Make Your Underwear Money Work Harder

It's almost unbelievable that this sturdy Hanes Underwear is sold at 75c a garment and \$1.50 a union suit. But it's true, and during war-time, too, when prices have gone way up.

You get double worth, double wear, plenty of warmth and comfort and no itching from the clean, soft cotton in

ELASTIC KNIT UNDERWEAR

Hanes Union Suits have a Comfortable Closed Crotch that stays closed; Elastic Shoulders with Improved Lap Seams which "give" with every motion; snug-fitting Collarette which always keeps the wind from the neck; Improved Cuffs at wrist and ankle which hug close and do not stretch out of shape; and every button is good Pearl.

Hanes Separate Garments have Double Gussets to double the wear; a Comfortable, Staunch Waistband: Improved Cuffs which hug the wrists and won't flare out; an Elastic Collarette which never gaps; Elastic Shoulders with Improved Lap Seams which 'give" with every motion.

Guaranteed

Pre-shrinking keeps all Hanes Underwear elastic and true to size and shape. We guarantee Hanes Underwear absolutely—everythread, stitch and button. Seams are unbreakable where the most wear comes.

Remember, you get Hanes at only 75c a garment and \$1.50 a union suit. See a Hanes dealer before he is sold out. If you don't know one, write us.

P. H. HANES KNITTING COMPANY Winston-Salem, N. C.



The Editor's Letter

Should Woman Help Manage the Farm?



pendent turn of mind rewhat they "petticoat"

government: Not long ago a small city in the West was having trouble about the public market. The women had been watching things

The women had been watching things rather carefully, and had reason to believe that the weights and measures needed a good overhauling. Sanitary conditions were bad, and they wanted the men to do something about it.

For the good name of the city, the council wanted to take action, but wished to keep the women out of the reform. They would have no women on the committees, and refused to recognize the evidence the women's clubs had already collected. They didn't want to give petticoat government a chance to get started. Matters dragged along until the state authorities finally heard of the bad conditions and stepped in and settled them. The city's civic pride suffered from the publicity given the whole affair, and the women felt that they had been cheated out of the fruits of their efforts.

But when the smoke had blown away, nonverse or printer concluded that it was

But when the smoke had blown away, popular opinion concluded that it was after all a woman's reform, and if the men had helped instead of hindered, the clean-up would have been a city achievement rather than a feather in the state's cap.

Perhaps this hasn't much to do with farming, but it has a lot to do with human nature. A great many men will accept feminine counsel in private when they will not do so in public. On the general run of farms, I venture to say that four out of five sensible farmers consult their wives on the more important business matters which come up. A woman's business sagacity may not always be as acute as her husband's, but a family consultation gives him a chance to get the matter clearer in his own mind, and, as the old saying goes, "Two heads are better than one."

Farming is also more of a partner-

ship than most other businesses, and if the wife is farm-raised she may contribute a good many suggestions. In a farm home I sometimes visit, a young farm home I sometimes visit, a young couple is trying to adopt modern methods as rapidly as they can afford to, but in the meantime they find there is no escape from long hours of hard physical work. Naturally most of this falls on the man of the house—there is no hired help—and he has little time to read. But his wife devotes a great deal of her spare time to agricultural reading, and when she finds an article or hint in a farm paper that seems to apply to their farm, she marks it and puts it away with others for her husband to read at the first opportunity.

One article on making cottage cheese from buttermilk brought about a profitable change in their dairy methods. A new method of feeding poultry was tried, and found to be even a greater benefit than they expected. They haven't the capital necessary to adopt many of the plans they know would be

many of the plans they know would be profitable, but they are getting along first rate.

BUT how about that other one fifth of the farms where the husband runs things pretty much to suit himself, and buys and sells and trades and wins and loses without the advice of his life partner? Perhaps the wife isn't interested in what goes on outside of the house. Have you asked her? Perhaps she has no business experience. not give her a little coaching; you may not live forever and she will need it. Perhaps she already has too much to say about the practical affairs of the farm. Then this doesn't apply, and you may stop right here, as it will be dangerous to read further.

What brings this whole matter up is a contribution received from Mr. Albert Van Little, who lives in Michigan. From his name I judge he is of Dutch descent. I picture him as home-loving, considerate, honest, the kind who will not let himself be imposed on twice in the same manner, but withal a trifle obstinate and self-centered. He has a personal experience to add to the considerable number which have already been printed in FARM AND FIRESIDE on





the subject off swindles.

"Have I ever been swindled?" he writes. "I should say 'Yes,' and in every case had I but listened to my wife's sincere advice and kept out of the deal I would have been much money ahead. But in my early married life, although I had no reason for it, I was like many other men who do not value their wife's advice much in business deals.

"But I now want to say to young farmers, and some older ones too, that if your wife is doing her part to make and save for the home you had better think three times about her advice before you plunge rashly into any deal. fore you plunge rashly into any deal. Then if it does come out right after you have both agreed upon it, you will not have that horrid feeling clinging to you that you have if you go entirely against her wishes and then all goes

"ONE of my deals was going into a farmers' stock company to buy a stallion. I invested a good sum there, and in the end somebody else got the money and finally the horse. We paid for the keep of the horse, and I never received a cent back. Since then I have learned that while such companies may succeed if well managed, the main idea is to sell a bunch of farmers a stallion for several times as much as it is actu-

ally worth.

"Another time I was wild for a sailboat, as I live near a lake. So Neighbor M., who has a cousin ten miles away who had a boat the size I wanted, porvived a sailboar to sixe his course 100 away who had a boat the size I wanted, persuaded me to give his cousin 100 bushels of excellent corn for the second-hand boat. My wife begged me not to go into this, as we could not afford it. But instead of listening to my wife, who I now see was right, I listened to Mr. M., who was working for the interests of his cousin. I got the boat, bought sails, and spent several days painting it. That summer my brother and I nearly lost our lives in the lake with it. That gave me enough of sailing, so I turned it up on the bank of the lake to rot. Another expensive lesson.

son.
"Then I was eager to trade horses with some jockeys who were camping near us. Wife said, 'No; they make their living by doping up worthless horses and trading them as sound.' But I went ahead and traded for one he said was 'sound as a dollar.' Next morning it had heaves in the worst form. So I got out a warrant and had the sheriff got out a warrant and had the sheriff meet me with his auto. We soon found the jockeys several miles away. The fellow appeared very much surprised to see the sheriff, and agreed to pay costs and trade back. "Also, after having some experience with traveling clothing agents, we now tell them that we prefer to buy of our home merchants or a reliable mail-or-

home merchants or a reliable mail-or-der house. I have had other costly lessons, but I know many others have had their troubles too, so I will conclude by saying again, 'Don't ignore your wife.'"

Some who read this may condemn this man for marrying a sensible womthis man for marrying a sensible woman and worrying her by his foolish use of the family money. But from the sincerity of the confession and the desire to give others the benefit of his mistakes, I am inclined to respect rather than pity him. Whatever may be said for or against petticoat government, I doubt whether the average farm woman has the least desire to help manage the farm. Leave out a very small percentage of shrews and you will find that most women are content with running their household affairs, with running their household affairs, and they in turn dislike any interference with their work. "Deliver me from a man meddling in the kitchen" expresses the idea exactly.
But in homes where husband and

wife consult each other on the more important problems pertaining to their duties—especially new problems—there is a contented feeling of mutual help, pleasant in times of success and comforting in adversity.

The Editor

Makes Insect Models

A Woman Entomologist Does Helpful Work with Crop Pests

By DAY ALLEN WILLEY



The only woman in the world who makes models of crop-destroying insects

ARGE models of the many insects that injure farm crops will be made by a woman for the U. S. Department of Agriculture. These models will be used to show the farmers how their insect foes look. The woman the Government employed in this work is Mrs. Otto Heidemann, wife of one of the expert entomologists connected with the Department of Agriculture.

Mrs. Heidemann is skilled in modeling, and has studied the life history of the insects. From continued study while making insect collections with her husband in the different parts of the United States,

husband in the different parts of the United States, Mrs. Heidemann became expert in insect anatomy, and familiar with the general appearance, shape, and object of parts only visible under a powerful

and familiar with the general appearance, snape, and object of parts only visible under a powerful microscope.

To produce a leg, a wing, an eye, or some other part of an insect on a scale several hundred times larger than the original, and reproduce it accurately in shape, is one illustration of Mrs. Heidemann's ability. The part may possibly have to be colored to resemble the insect's natural hue. Then it must be composed of material which will retain the shape into which it has been fashioned by the modeler.

When we think of even the mosquito or housefly, with the position of the legs, the curves of the wings, the conformation of the heads, it is evident that the worker must have a variety of materials to make a successful reproduction. Mrs. Heidemann has not only utilized wire, thread, celluloid, papier-mâché, and rubber, but has been obliged to devise secret compounds of substances to suit her needs.

In fashioning an insect model the skeleton of the body is one of the most essential features. In many cases this can be made of steel wire, which not only retains the proper shape, but is also strong enough for the purpose. Steel wire has the necessary lightness.

The covering of the skeleton depends on the nature of the insect. Some have the surface of the body

The covering of the skeleton depends on the nature of the insect. Some have the surface of the body covered with microscopic hairs. Other insects have smooth bodies. Papier-mâché is suitable for many of the models, but occasionally celluloid is used. Wire forms the "bones" of the leg, but if it must be made thicker in some portions than others, Mrs. Heidemann coats it with one of her compounds. She proportions the leg properly while the material is plastic; when it hardens it assumes a permanent form. The wings of most of the designs requiring them are composed of celluloid of the proper thickness. Occasionally wire may be

Occasionally wire may be eeded around the edge or beneath a wing to strengthen it, but often the material is sufficiently stiff and strong to be used without any reinforcement. Even the minute hair is imitated with fine silk threads, while Mrs. Heidemann has also succeeded in devising a substitute for the covering on moths. The material strongly resembles feathers when seen under the microscope.

In making one of these models of insect crop destroyers, the body, the wings, or the legs may be made first, according to convenience, but before beginning operations she traces a working drawing. This is necessary to attain the proportions needed. The insect is mapped out on paper before any part of it is finished. The drawing is always done with the aid of the microscope, and the modeling is also performed with the aid of this instrument. After the specimen to be modeled is placed In making one of these models this instrument. After the specimen to be modeled is placed under the lens, the instrument is properly adjusted, so the eye can see it distinctly.

The paper on which the drawing is made is carefully meas-

ured, and divided into squares of equal size. In this way the exact proportions of the enlargement are more easily obtained. With the drawing before her eyes it is necessary only to select the part to be made first, and begin the work.

The tools Mrs. Heidemann uses are few and simple. Pincers, scissors of various sizes, needles, and several knives comprise the greater part of the outfit; but though the equipment is not elaborate, the various processes require much time. It may take several weeks' time to finish one model.

Mrs. Heidemann does not work continuously on a single specimen, but may have several partly constructed models in her curious laboratory, finishing a part of one, then of another, as may be most convenient to her.

The models are sent to different parts of the country to be shown at rural fairs and other gatherings. An agent of the Department goes with them and explains methods of destroying the insects they represent. Models of-the cotton-boll weevil have been shown in the South and advice given in regard to ways by which this pest can be prevented from destroying the staple crop of the South. The appleworm models have been exhibited in the many orchard districts, and the fruit growers have been greatly helped by the advice given by the agents.

This collection of models, created by the expertness of this interesting woman, forms one of the interesting exhibits in the Bureau of Entomology. Throngs of country persons who have visited Washington have been educated in methods of preventing damage done by these insects to fruit and vegetables, by studying the models and listening to the entomolo-

damage done by these insects to fruit and vegetables, by studying the models and listening to the entomologist in charge of the collection. The models in the collection include the va-

collection include the variety supposed to carry the germs of fever—the comparatively harmless singing mosquito—and the kind which is believed to spread malaria. The chinch bug, almost invisible in life, is reproduced much larger than a pair of cuffs, while its eggs, microscopic in their natural proportions, are as large as shotgun cartridges. One of the curious results of this magnified modeling is the repulsive and ugly appearance of some of the insects least dangerous, and the attractiveness of some of the most dangerous ones. Perhaps the most common ness of some of the most dangerous ones. Perhaps the most common winged insect which one knows is the housefly. It is found nearly everywhere in the home.

One of the most interesting parts of the collection is a huge apple, made principally of papiermâché, showing the apple worm, modeled in plaster, feeding in the interior of the apple.

Delivering a Mule

By A. HICKLIN

HEN I was selling off some surplus stock in the fall of 1910, I sold a two-year-old mule to a negro. The mule had been raised a pet, but had not been broken to lead. I went with the negro and lead a two-year-old filly that was raised with the mule, for I knew the mule would follow her

anywhere. After we had traveled about a mile the filly began pulling back on the halter. So I tied the rope attached to her halter to the pommel of my saddle and got along nicely until the mule, which was about ten rods in the rear, became frightened and ran at full speed, and dashed between the filly I was leading and the mare I was riding.

In an instant the saddle was jerked from under me and I was thrown to the ground. The sudden jerk had thrown the saddle across the mule's neck, securely fastening her to the filly. They ran about 40 rods, divided on either side of a large tree, oroke the rope in two and stopped at a field gate near-by. Just inside the gate was the negro's house. So we had the mule home.

Just inside the gate was the negro's house. So we had the mule home.

The negro took a rope to tie the mule, but she refused to let him come near her. He made a lasso and tried to rope her, but failed. I took the rope and didn't untie the lasso noose, but tied the other end around the mule's neck. In tying I carelessly dropped the lasso end on the ground and got my foot in the noose. The purchaser started up to get his property, when all of a sudden the mule went across the field like a streak of lightning, and, the noose being around my ankle, I went too, hitting only the high places. The mule kept this up for about 50 rods across a cotton field, and then turned and went back to the mare across a cornfield.

You can imagine how much skin was left on my back, and how many bruises I had when the mule ran up to the mare and stopped. I released myself and bade them farewell, with the hope that the negro would like his mule but I might never see it again.

A Rolling Stone

By C. H. McCARY

HEN twenty-four years old I found the girl of my choice and we were married. This was in July, 1889. The first half-year I worked on the railroad as I had done before. Being on a bridge gang I was away from home two and sometimes three weeks at a time. The following winter I ontered the

at a time. The following winter I entered the

For five years we rented one place, then another, moving every year, had poor crops and often complete failures. I shudder to think of how poor we

I then rented another farm of 160 acres, put in corn, oats, and wheat, and had a bountiful crop that year—2,200 bushels corn, 1,000 bushels oats, and 1,000 bushels wheat. We said, "Now is our chance for a home." I sold the crop and bought rights to

160 acres of river-bottom land.

I paid him \$100 for his rights, built a threa-room cottage had

built a three-room cottage, had a well put down, and went back for my wife and three children.

We arrived there in September, put in a piece of wheat, broke sod, built a barn, fenced the place, and with some 75 brown Leghorn hens and five cows we came through the winter very well.

For two years we just made a living. The third year I raised 300 bushels of corn to sell and some stock. When these were marketed I bought another 160 acres for \$600, kept it one year and sold both farms for \$3,000.

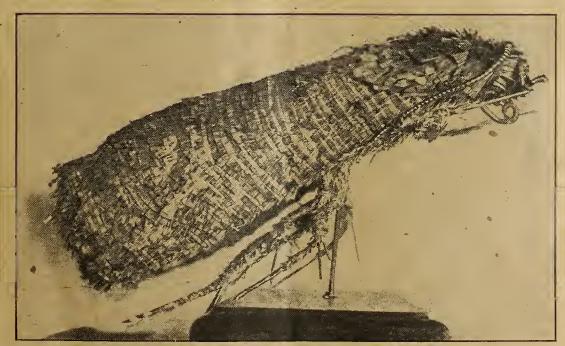
I worked in a nearby city

I worked in a nearby city for six years, then gathered all my money together, went to Iowa, bought a home, and lived

Iowa, bought a home, and lived there four years, bought more property, and three years ago sold out for \$4,000, chartered a car and moved to Texas. We now have a well-equipped farm. This is all the result of hard work, saving, and making an effort to own a home. I have done no more than anyone else can do—just managed properly, saved, and applied the proceeds to a home.



This is the boll weevil. The specimen is magnified several hundred times



The coddling moth lays a great many eggs which hatch into worms. The worms bore into apples and other fruits

HARM HIRESIDE

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December 16, 1916

The "Spud" as a Gamble Crop

ALL farming has a large enough element of chance in it to make it a more or less "sporting" proposition. There is no safe bet against crop destruction by frost, flood, hail, and drought throughout great areas of our country, and in spite of such modern aids as fungicides and insecticides, destructive pests and blighting diseases frequently interfere with "a sure thing" in commercial cropping operations. But year in and year out, potato-growing scales high as a gaming venture. The present harvest finds some potato-growing centers cashing in at the rate of \$400 to \$600 an acre for a crop the production cost of which is under \$100 an

In the noted Aroostook potato-growing district, growers are loading their crops on potato trains, which are sold f. o. b. for \$1.50 to \$1.60 a bushel. These growers think an acreage of less than 20 to 30 acres to the farm is small operating, and a yield of under 300 bushels an acre indicates inferior farming when the season is favorable. Crops of 60 to 80 acres of potatoes grown on 150-acre farms are by no means uncommon. Even a 50-acre potato crop yielding 250 bushels an acre and sold at \$1.50 a bushel means a gross income of \$18,750, and over \$12,000 net. Can an operator on the Stock Exchange show anything much better, all things considered?

Banks Finance Calf Clubs

PERHAPS the interest which banks are now taking in agriculture is selfish, for, stripped of all cloaks, the chief effort of a bank is to make money. But if the surrounding country can be benefited at the same time, who will deny that the dabbling of banks in agriculture is after all a good thing? Anyhow, W. Scott Matthews, dairy and food commissioner of Illinois, sees in the calf clubs conducted by eight banks in the State the means of improving dairy stock without any financial investment on the part of the farmer's family. The banks furnish the calves, and their parents also receive some benefit by having good stock on the farm.

This is briefly the way the plan worked at Brighton, Illinois, where the began the work of securing members," says Thomas F. Chamberlain, cashier, "and the heifers were delivered March 18th. The total membership of our club is eighty-five, of which thirty-three are girls. They seem to take just as much interest as the boys. Twelve or thirteen years is the average age of the members.

Up to this time six of the heifers have freshened, and before our sale we expect this number will be increased to fifty. When our public sale is held in and square treatment to its subscribers December, these heifers will be sold to the highest bidder.

"After the amount of our note is AND FIRESIDE family.

to the child as his profit."

After organizing the clubs, the customary procedure of the banks is to purchase a quantity of heifer calves from six to twelve months old. They are usually a high quality of grades and cost about \$45 a head.

The parents sign the notes with the understanding that the calves are the property of the children, and that each child, as far as possible, is to undertake the direct care and management of his calf. Several of the banks have offered cash prizes of from \$5 to \$15 for the best results in the care of calves and to those making the most out of the

Of course, this is not a case of getting something for nothing. There will naturally be feed bills, veterinary fees, and some risk which a practical dairyman must consider before he signs the note for his child. But there is this advantage: Instead of his going to the bank as a borrower, the bank comes to him as an investor.

The proposition appears to be fundamentally sound. It establishes more cordial financial relations between dairymen and bankers, and the children receive valuable business training. On the whole it looks like one of the best plans the bankers have thus far of-

Clothing and Machinery

THE Bureau of Safety, 72 West Adams Street, Chicago, has issued a timely warning on the subject of loose clothing and machinery. The caution is directed to machinists and factory workers, but it applies with even greater force to farm mechanics who are now using more powerful machinery than ever before and also a greater variety

"Unbuttoned sleeves and loose jumpers," says the Bureau, "are dangerous. They may catch on moving machinery or be drawn into a fan or blower. Keep sleeves buttoned and jumper inside of overalls. Unfastened or gauntlet gloves may catch on machinery and belts. Keep your clothing in a safe condition and avoid this class of accidents."

For outdoor work around machinery, here are some suggestions that apply especially to cold weather: Keep scarfs and mufflers well buttoned inside of the coat. A snug-fitting cap is better than a hat. If overalls are loose or turned up at the bottom, wear leggings over them. Gloves are safer than loose mittens. A short jacket is preferred to a

Anyone who stops to think of the reasonableness of these warnings will accept them without asking for object lessons, of which there are unfortunately

Guarantee Fair Treatment

AVEAT EMPTOR is Latin for "Let the buyer beware." Time was when frequent repetition of this homely sentifarm boys and girls take care of them, ment was all that kept folks out of the and receive all profits over six per cent, poorhouse. But a lot of different things have helped to relegate this phrase back to the olden times from which it came, and foremost among these influences is advertising. If a manufacturer has advertised that his watches are sold at. First National Bank was the pioneer in one dollar, one dollar you will pay; no the Bank Calf Club movement: "We more, no less. If an automobile is advertised to sell at one thousand dollars, one thousand dollars you will pay, with the assurance that a reputable firm stands back of the purchase.

> A legitimate profit is essential to successful business, and advertising has worried the sharper and the trickster out of his job, and has made the maintenance and standardization of prices

> All of which has helped to enable FARM AND FIRESIDE to guarantee fair in their dealings with advertisers. We may forget caveat emptor in the FARM

taken out, the balance goes in each case Power That Moves Mortgages

STRIKING cartoon that recently came to my notice pictures a tractor hauling a mortgage off the farm. With it is a story telling the advantages of selling surplus horses in the fall to save the cost of wintering them. This saving, combined with the elimination of incidental expenses, such as shoeing and harness repair, is pointed out as going a long way toward buying a trac-

Just as the automobile industry has built up public enthusiasm in the use of motor cars, the tractor business is at work on a similar job. And when the public is once thoroughly convinced of the merits of a new article, it takes hold and helps in the educational campaign.

A certain farmer who had read all the stories about tractors he could find in the farm papers finally bought a tractor, but was unable to make it pull his plows as well as his horses had done. But his enthusiasm about the machine caused him to blame himself rather than the tractor. He reasoned that it was made to plow and he must be doing something wrong. In an hour's time he had located the trouble and was rapidly turning over smooth furrows.

When just reading about tractors can put a man in that frame of mind, there is nothing to fear any longer from those who decry learning farming from books and papers. We succeed most fully only when full of enthusiasm. And if a tractor can take the mortgage off the farm of the man mechanically inclined, horses, cattle, hogs, sheep, and poultry can do the same thing for others. A thorough understanding of one's work gained by experience and reading, combined with self-confidence and persistent labor, is the power that moves most of the mortgages.

Our Letter Box

Canning Meat

DEAR EDITOR: Some years ago we lived in the mountains where it was impossible to get provisions delivered impossible to get provisions delivered after the snow came, so each fall we laid in a quantity of meat, usually 150 or 200 pounds. One year, spring came early and a quantity of meat began to soften. Being afraid I'd lose it, I decided to can it. I cut it into small pieces, packed it tightly in glass jars, added a teaspoonful of salt to each quart, and filled any cracks with water (very little was needed); set the jars into the wash boiler with a grain sack into the wash boiler with a grain sack folded under them, poured in lukewarm water to the necks of the jars and brought the water to a boil and kept it boiling hard four hours.

Some jars were not opened for two years, and the meat was like fresh meat—made delicious meat pies, hash, meat—made delicious meat pies, hash, or stew. Now I can all kinds of meats. This year I have put up turkey, duck, goose, chicken, veal, and pork, thus saving feed, which is very high here. I also do up all kinds of vegetables this same way, cooking four hours at hard boiling. I have cauliflower, beans, and squash canned in this way. Beets I cook, skin, pack in jars, and fill up with boiling vinegar, cool, then set away.

I have tried putting fresh pork "down in lard," and lost the meat. But by folding slices into a jar and cooking in this way, I always have fresh pork ready on hand to fry steaks from, and lose none. I hope others will try my way. Mrs. B. F. WALKER, California.

Hasn't Any Farm Problem

DEAR EDITOR: In response to your invitation of July 1st issue of FARM AND FIRESIDE for every reader to write their ideas in the "Farm Problem," I will say that it is no problem to me. The whole question is as plain and simple to me as the nose on a man's face. Everyone who knows anything about the prosperity of the country cannot fail to recognize the fact that agriculture is the fundamental basis of all prosperity. Land is the best paymaster a man ever served, and esecially here in the lower Southern

Everything that will grow in a temperate climate will grow here, and also a variety of semi-tropical plants. Any man who has the determination and grit to stay at his work can come here, and in a very few years accumulate a competency and be independent for life,

surrounded with every comfort. He can work three hundred days in the open every year, and his live stock can run out all year, winter and summer, and year, winter and summer, and

keep fat.
We have churches of all denominations, good public schools, most of the secret orders and societies, railroads, telephones and telegraph, rural routes, and all the country conveniences, good roads phones and telegraph, rural routes, and all the country conveniences, good roads and automobiles. The population is a splendid class of Anglo-Saxon, who would meet any newcomer with open arms and assist in every way possible. People coming here to settle would not have to endure the hardships incident to opening up a new country, as every public convenience and utility is already here

Plenty of labor can be secured at reasonable prices. It is the country for a young farmer with a little capital to start, as the climate is so mild you do not need the expensive buildings and shelters for stock that are required in

I have been a farmer all my life, and I desire to see this country filled up with a good class of farmers. There is plenty of land for all that will come.

FRANK S. MARGART, Alabama.

Concerning Country Women

DEAR EDITOR: In a recent issue of another farm paper I take appeared an article, written by a city-bred countr woman of two years' experience, criticizing country women in general.

They seem to have no redeeming features in the estimation of this lady, who would drive a tired horse for mere pleasure after it had been worked in the field all day even if it killed the

She alleges that country women do not apply their brains to systematizing their work so they will have time to dress up every afternoon, even if the men do have to work until nine o'clock in the evening to get all the chores done; also that the country women in general do not know how to wash dishes. She says they take only three inches of water in the dishpan for a heap of dishes. The way country women wash dishes appalls her, and she may never lose the sense of shock it first inspired by seeing one country woman wash dishes in that manner. She therefore proceeds to judge any and all farm women by the one she saw—a rather narrow judg-

It will amuse many country women whom I know. Their heads contain brains enough to be proficient in all the housekeeping and farming knowledge of deing each edge. They are capable of doing each and every duty that comes to their hands. I approve of all mechanical conveniences, both inside of the house and around the farm, but I do not approve of women running around dressed in their best while their men-folks are working hard in the fields. My menfolks come before any fine company, so folks come before any fine company, so my house has no place where my men

I was advised by a well-meaning but much-deluded lady to have my hired help wash outside, eat in the kitchen, and go up the back stairs so the front part of the house could be kept clean for company. Which should be considered first, my family and those who work faithfully for us, or company? My family comes first; I care very little for

MARY WELLNER, Minnesota.

Farming Cut-Over Land

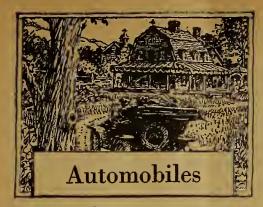
DEAR EDITOR: Eighty acres of timber land near Merrill, Wisconsin, was bought for \$625, eleven years ago, by Arthur Krueger. Twenty-five dollars was paid down on the farm, and a mortgage for \$600 was given on the land. Now the farm is improved with a comfortable house, a well-built barn, and other outbuildings. Thirty-five acres of the land are cleared of timber and twenty acres are in cultivation. Mr. Krueger is free of debt.

The twenty acres of tillable land are worth \$50 an acre. The other sixty acres are worth much more than Mr. Krueger paid for them. Logs felled on the farm furnished the material for the first house Mr. Krueger built on his Ten million acres of cut-over timber lands in northern Wisconsin are waiting for settlers. The prices are lower even than Mr. Krueger paid for his farm. JAMES WISE, Wisconsin.

Appreciates Cover Pictures

DEAR EDITOR: I have been taking your paper since January. I have enjoyed the outside covers just as much as the inside, so much in fact that I thought I must spend time to tell you that I for one think they are the nicest pictures of any magazine I take, and I take seven. The cover pictures are so true to nature. I enjoy every one thoroughly and wonder what the next one will be.

E. SARGENT, Michigan.



Radiator Covers By Frank Orr

WISCONSIN car owner who in-A tends to run his machine all winter wishes to know whether a radiator cover is any better than a robe thrown over the hood when a car is left stand-

When an automobile is used to any considerable extent during the winter a radiator cover is a great satisfaction and has several advantages over a robe. It will not blow off and is not so likely to be appropriated by somebody else when your car is left standing in a city. Most radiator covers have a front flap which can be rolled up or let down to admit any desired amount of air, more for long trips and less for short errands. Thus you can keep your motor nicely hot while the car is running, and when it is standing some heat will be retained in average winter weather for four or five hours. In addition, the radiator cover, being water-proof, is unaffected by melting snow which makes a robe rather disagreeable to handle. Considering their small cost, from \$1 to \$4, such a cover is generally advisable. advisable.

Protect the Upholstery

By Carlton Fisher

I HAVE hauled cement, feed, ice, tools, wire 'netting, and small boxes of freight in my touring car during the past year, and the upholstery shows scarcely a scratch. For a person having much hauling of this kind to do a light trailer would be best, but I have managed very well by the liberal use of burlap sacks, plenty of newspapers, and an lap sacks, plenty of newspapers, and an old quilt for padding.

The main precaution is to pack your load so it will stay in place. The few scratches and mars my machine has suffered from hauling supplies have been caused mostly by small articles insecurely packed.

Auto on Small Income

By Edna S. Knapp

FATHER had been talking automobile for years, but was employed all the week and tired on Sundays, the last few years business took all his time and strength. We studied the subject seriously to find out, if possible, what it would cost to run a machine.

No two people had the same experience, the only man we knew well enough to be frank said decidedly: "The ordinary man cannot afford to own a car just for pleasure."

We could find out the average cost of

gasoline and oil and wear on tires per mile, but the real cost of repairs and upkeep we could not get at in the least. That proves to be an individual matter, and is larger the first year on account of "fool things" done by the amateur driver, and the times he takes the car to the garage to see what is the matter but essential thing.

of the greenhorn who tinkers his own machine. Many times Father has found the repair man shaking his head over some shiny new automobile, with the remark: "It would have taken me one third of the time and cost only one third as much if that man had let his car alone and not tried to find out what was the matter."

Finally the family decided to buy a car and run it when we could afford to. The income was small but certain, and Father had retired from business. Our limited means suggested buying a used machine, but everybody who knew any-thing about it told us it was far more risky than buying a second-hand horse. One day in May I saw in a Sunday paper an advertisement of a car for sale cheap for cash. The car had been run 150 miles. It was to be seen in our next town. Father saw it and easily verified the owner's story and bought the the owner's story, and bought the car. Mr. R. had bought it and learned to run it just as the doctors ordered his wife off to a sanitarium, and he needed the

Building the Garage

The former owner was employed, so he could give Father lessons only on Saturday afternoons, therefore Father did not obtain his license until June 1st. Mr. R. said Father seemed to know instinctively when he had room to pass and how much room the automobile took up. Father said this was just child's play to a man who had driven a horse from childhood. Father had driven a touring car a couple of hundred miles the preceding summer, and that helped a little.

While waiting for a license, he had to build a garage, and did practically all the work himself from motives of economy. The expense was cut about economy. The expense was cut usin half. The garage is 10x15 feet, with cement floor and approach, steel sides and doors, and asbestos roofing. It cost a few cents over \$50. The foundation is stone four feet deep, with three inches of cement for the floor. The frame for the sides is anchored in the cement, and the two pieces on each side of the doorway are tied by a flat piece of iron sunk in the cement. The doors have a wooden frame covered on each side with steel, each door measures about 4x7 feet. Father had help for half a day in hanging the heavy doors, and a daughter held the sheets of steel siding in place until he could drive nails to hold them.

The building is painted dark red, and has two half windows over the bench at the back and one at each side. dow and door frames are covered with steel; the edges of the wooden roof are covered with roofing, and eaves troughs have been added. The building has proved perfectly satisfactory so far. We have kept account of expenses and know what it cost us to run the car one

season for pleasure.
We have spent \$119.11, including license, registering, gasoline, and repairs. Perhaps a short history of our adventures with the car may be interesting. The longest day's run was 124 miles.

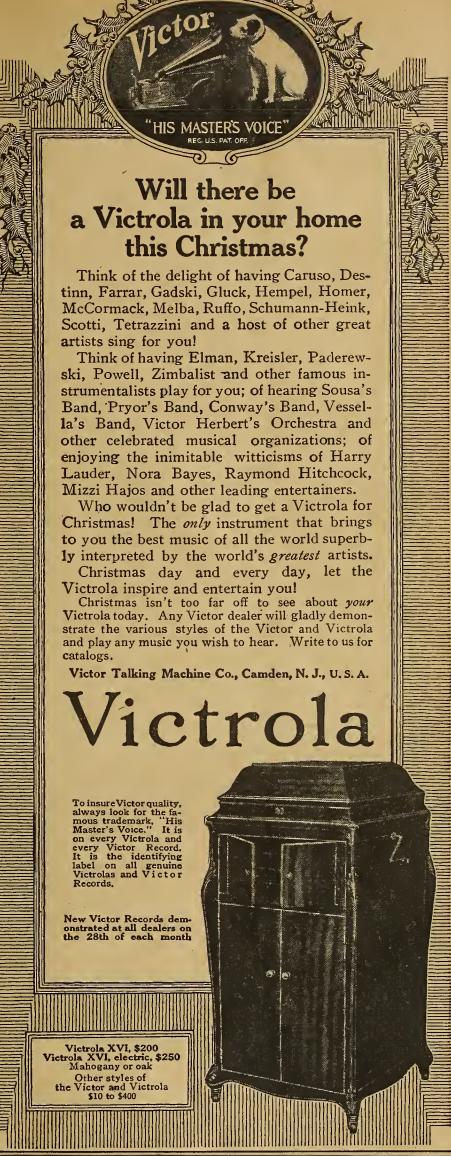
Incidents When Learning

The first trip without Mr. R. was taken with some tremors, but nothing happened. The next trip to the garage (Father wanted to get more acquainted with the car's anatomy) ended suddenly against a stone post at the gateway leading to the garage. We came home in another car and Father got ours next day. Repairs cost only \$1.50, as he was running slowly. The next trip we turned into a crowded village street and had to make an abrupt turn to avoid some women who had walked partway when he has forgotten to do some small across and stopped to talk. As a result but essential thing.

Still, this man's car is safer than that how was right there, so we were on our



When an implement or rough boxes must be carried in the car, wrap well with burlap or an old quilt, and tie securely





Quality Footwear Is a Useful Gift You can't think of anything that will please any of the family more than a pair of sturdy "Ball-Band" Rubbers with the Red Ball Trade Mark.

Whether it's a pair of rubber boots or warm wool lined arctics or light weight rubbers for street wear, the satisfaction from such a gift is going to be complete and lasting. Look for the Red Ball so you will be sure of the genuine. Write for our illustrated booklet, "More Days Wear," and select your gifts from the many kinds of useful foot-wear shown. Your dealer can supply you. Fifty-five thousand dealers sell "Ball-Band" and nine million people wear it.

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New York, March 1st 1917 No 11300 Metropolitan Bank Pay tullie A. Participant One Thousand The CROWELL PUBLISHING COMPANY
PRIZE ACCOUNT David Blair SURPHINEME J. R. Long

For One Thousand Dollars

This is Going to Happen

OME time soon, after February 20th, the postman will knock at the door of one of Farm and Fireside's readers, somewhere in the United States, and hand whoever comes to the door an envelope in which will be found our check for \$1,000.

The recipient of this check will be the reader who has submitted the best set of suggestions for titles to the fifty pictures which we are presenting without titles now. These pictures are drawn to represent familiar farm implements, machine parts or mechanical terms.

The Key to Success

To make the opportunities of all participants equal, we have issued what we call the Official Key Book. We call it this because, containing, as it does, 3,000 items from which the pictures were drawn, and to which title suggestions will be checked, it is truly the key to the game and success. You can use this book by referring to a copy which we will place on public file in any city or by securing your own personal copy, as is shown by the coupon below.

Another Big Help

A companion book, the Reprint and Reply Book, contains the fifty pictures, with spaces for as many as six title suggestions for each picture. You are not required to use the Reprint and Reply Book. You can make up a set of title suggestions as follows:

The Reprint and Reply Book enables a participant to submit six title suggestions in one set. This is a maximum number of title suggestions permissible in one set. It is not compulsory, however, that participants use the Reprint and Reply Book. Sets of title suggestions may be submitted in either one of two ways: (A) in the Reprint and Reply Book, or (B) in single picture sets.

How to Submit Single Picture Sets

Participants may also submit sets of suggestions written on forms supplied by the participants either with pencil, pen, or typewriter, preferably on sheets of uniform size. Each sheet must be numbered in order and have pasted thereon a picture clipped from Farm and Fireside or drawn thereon a duplicate easily recognizable, beneath which picture or drawing is to be placed one title suggestion (one only) for the picture, and the player's name and address. If a player desires to submit more than one title suggestion for a picture the additional title must be included in a second complete set prepared as above. In other words, when submitting single sets of title suggestions, each set must include no less and no more than fifty pictures (Nos. 1 to 50) with one title suggestion for each picture and with the participant's name and address written on the bottom of each sheet in every such set. When submitting single sets of title suggestions the pages must be arranged in numerical order, securely fastened together, WRAPPED FLAT and sont prepaid by express or postpaid with stamps affixed at 2c per ounce.

This Saves Lots of Work

Those who do not wish to go to the trouble of submitting their sets of title suggestions as above, can use the Reprint and Reply Book. This contains the fifty pletures used in the Farm Implements Game and opposite each picture are six spaces for title suggestions to each picture. These spaces are numbered one, two, three, four, five, six. As explained by Rule 7, you should, when submitting more than one title suggestion for any picture, place the suggestion you regard as best at the head of the list of title suggestions for that picture, your second best suggestion in second place, etc., etc., This applies to sets submitted in Reprint and Reply Books.

Get Back Pictures Free!

Five pictures, numbers 31 to 35, appear opposite. Study these and see if you cannot very easily evolve fitting titles for them. Send your name and address for all back pictures free. With pictures 1 to 30 offered free and pictures 31 to 35 on this page, you will have all the pictures which have appeared to date. The balance of the fifty pictures will appear frequently in these columns and when all fifty have appeared (the last installments will be in our January 20th issue) you can submit your suggestions. You will be given until midnight of February 20th to prepare and submit your set of suggestions.

400 Awards—\$3,500!

At the beginning, we explained that \$1,000 would be ven for the best set of title suggestions. The awards are 0 in number and total \$3,500 as follows: For the best set title suggestions \$1,000; for the next or second best set 00; for the third best set \$250; for the fourth best set \$5; for the fifth best set \$100; for the sixth best set \$75; the separable best set \$50; for the fifth best set \$75; for the seventh best set \$50; for the eighth best set \$50; for the ninth best set \$25; for the tenth best set \$25; for the eleventh to fiftieth best sets \$10 each; for the fifty-first to one hundred and fiftieth best sets \$5 each; for the one hundred and fifty-first to three hundredth best sets \$2 each; for the three bundred and first to four bundredth best sets \$2 each; for the three bundred and first to four bundredth best sets \$2 each; for the three bundred and first to four bundredth best sets \$1 each; total, four hundred awards, \$3,500. No award will be dlvided.

In case of the awards of identical value will be made to each of the tying participants.

Special Subscription and Free Action Subscription and Free Action Subscription and Free Action Subscription and Subscription



No. 31—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

No. 32—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

No. 33—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

No. 35—What Farm Implement, Machine Part or Mechanical Term Does This Picture Represent?

Send the Coupon To-day way in three minutes. The very next trip developed a puncture, and we began to wonder if things happened every

Then for weeks nothing untoward occurred. Sister came home from school to be surprised at our new possession, and we improvised a seat, so the runabout often carries three.

We have never driven the car fast

about often carries three.

We have never driven the car fast.
Several of the repairs have been on account of the trouble Father had in learning to back, one miscalculation and a telegraph pole cost \$5. The worst single item was when a connecting rod broke. During the summer the car seemed to lose power. The local repair man found the trouble. The emergency brake on one side was expanded and broken, it had been dragging all this time. He fixed it and the car ended the season in fine shape. The nearest to a serious accident was in crossing a city square when a pedestrian who had square when a pedestrian who had nearly reached the sidewalk changed his mind and started to walk in the street parallel with the sidewalk. He sat down on the right mud guard, but was not even bruised. He took the number, but nothing was ever heard from him.

Renew Old Friendships

Tire difficulties have been few, though a sharp branch on a woodland road made one new tire necessary, the old one was patched later, and we no longer wonder that the wise owner carries a spare tire and inner tubes and his checkbook. We had a shower of autosupply catalogues and found those that offered great bargains, generally shown up later by somebody's experience as humbugs.

We learned of all sorts and manner of things we would like for our car, but principally we want a mirror that will show the driver what is behind him. We long for wood instead of wire wheels, because easier to keep clean. We have found that the instruction book may instruct and the teacher may warn, but the lessons that stick are those that hit the pocketbook rather

Next summer Father can get a chauffeur's license, and perhaps earn a little with the car, but he will not get rich, as he does not want to run in traffic nor evenings, Sundays nor holidays. A busy head nurse at the sanitarium where Sister spent a year has a car that earns its keep by taking patients to ride.

There are advantages in having a touring car, and we would like to own one and take our friends out.

The crippled member of the family feels like a new person, no longer a shut-in. She has been over all the pretty country roads around our home. We all have renewed old friendships that had been allowed to lapse.

The expenses for the car will seem easier next year, as car and garage are paid for. We have decided to start a gasoline fund instead of giving each other Christmas presents. To run the car means economy, but it means so much in health and pleasure that we are willing. The sum spent on running the car represents what we have usuthe car represents what we have usually saved or spent for little luxuries. We shall spend the sum on one thing instead of many.

Lights on Buggies By Chester G. Reynolds

HAVE found that a good buggy lamp is necessary for safe travel at night. In these days of high-powered automobiles, anyone who travels after dark in an unlighted buggy endangers himself and others.

While an electric buggy lamp or good oil side lights are advisable, even a lighted lantern carried at the side of the buggy will give a measure of safety.

Carry Extra Oil

AN OHIO car owner contributes this bit of experience. "When I make a long trip by motor," he says, "I intend long trip by motor," he says, "I intend to carry a can of lubricating oil with me instead of buying oil from garages along the road as I have done in the past. I seldom can get the kind of oil I want from small garages, and therefore soon have a mixture of four or five kinds. Besides, I think I can save some money by carrying my own oil."

Certainly the best plan is to carry your own oil and there are still other

reasons besides economy and convenience. You save delay, your engine works best when using the oil best suited for it, but, most important of all, an extra supply of oil may save you a burned bearing if you are miles from a garage and your oil gauge tells you

Experienced motorists carry a gallon can of oil in their cars as a reserve supply, and avoid the worry and trouble that follow the use of poor oil when they can get nothing better along the road.





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Big Money Maker

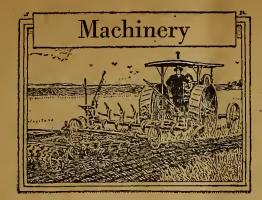
Low price puts it in reach of every home and makes sales easy. Shull working spare time made \$10 an ight. Jennings sold 5 first evening. Send for sworn proof. Write quick for territory and demonstrating sample.





NOOD SAWS

are built to withstand the greatest stram and wear that a wood-saw gets. Strong, rigid frames of heavy steel, or of hard-wood; bolted, braced and mortised. Non-rigid boxes—dustproof, non-heating and self-adjusting. Shaits of lathe-turned steel. Ten styles: with tilting or sliding tables. Get Wood Saw Booklet now—also circular about the Appleton All-Purpose Grinder. Appleton Mfg. Co., 603 Fargo St., Batavia, III.



Truck Surprises Neighbors

By W. B. Ellsworth

WE HAVE been operating a 1½-ton motor truck on our stock and grain farm since April 1, 1915, and consider it a success in spite of the argument that a truck to be a paying we feel that this is offset by the fact that the actual depreciation is not so great and the life of the truck is lengthened that much more.

Our nearest market is seven miles Our nearest market is seven miles away, and I have delivered six loads of wheat to the elevator in one day between 8 A. M. and 6:30 P. M. Those are the hours of leaving and of getting home from the last load, and also includes an hour out at noon. On the same day one of my neighbors delivered six loads to the same elevator, but used three men and three teams. and three teams.

Less Shrinkage in Hauling Hogs

Since we have had the truck we have not had to call on anyone to help in our hauling, and have had more outside cash work offered to us than we could possibly do. This was rather a surprise, as we had not supposed there would be any truck business in the country. It helps considerably toward the cost of the truck, which was \$1,552, including everything. The ability to deliver carload lots of hogs in a day when teams cannot be secured is a decided advantage, especially when the market is up a tage, especially when the market is up a little.

In hauling hogs by wagon the shrinkage, I am told, may be as high as eight per cent. I have personally seen a 300-pound hog shrink 20 pounds. The first carload of hogs that we delivered with the truck gave a shrinkage of only 40 pounds on the load at Chicago. We are located in north central Illinois. On another occasion we received \$1 a hundred more for some heavy hogs, owing to our ability to deliver them promptly by truck. This alone netted us \$35. One of the hottest days last summer I hauled 50 hogs for a neighbor in five loads, and did not lose a hog. In fact, only one got hot at all. I have hauled about a thousand head of hogs since buying the truck, and persons for whom we have hauled do not care to go back to the wagon for hauling their hogs except in cold weather. The same trip that takes two hours with a team I can make with the truck in forty minutes.

Not Afraid of Trains

Our truck weighs 5,000 pounds, and has 5-inch tires in the rear and 31/2-inch tires in the front. All are solid. In buying a truck for all-purpose use be sure that the gross load weight will not be more than the scales you will have to use. This and your pocketbook are all that need limit the size. Anyone who expects to use a light truck in heavy service will be disappointed if he buys a light truck, because if ever overloaded it will not stand the strain.

A 1½-ton truck is a good size for farm use, and it is faster than the larger sizes. If you can always load to capacity, the heavier trucks are probably cheapest to operate for the amount of load carried, but you will lose money in running them if you have many light

Operating costs are not much more accept modern methods.

than for the average car. Our truck goes from six to twelve miles on a gallon of gasoline, depending on load, grades, and the condition of the roads. Our total repair bill thus far has been 90 cents for a defective valve and for repairing a leak in the gasoline-pipe line. I would not advise any man with mud roads to tackle the truck proposition. mud roads to tackle the truck proposi-tion, as I think it would be a losing vention, as I think it would be a losing venture. When I bought my truck the neighbors said, "A fool and his money are soon parted," but the same ones have paid me many a hard dollar to help them out when they were rushed and could not get teams. A good many of them are now talking trucks, but haven't mustered the courage to take

One of the things I like most about the truck is my ability to go around railroad yards and not have to watch a team or get someone to hold it.

Posts Pointed by Power

By M. C. Knights

UTTING and preparing a year's supply of fence posts requires considerable time and not a little skill.

We are fortunately supplied with plenty of nice straight chestnut trees, and from these we cut the dying ones each year for posts. First we cut the trees, trim them, and draw them to the chip yard.

Here they are cut into 6½-foot lengths and split into the desired size. We split with wedges, driving the first wedge in the center of the end and the next one in the side. We continue driving them in the side until the post is split.

Always split from the top, as the knots tend to draw toward the center



Sharpening fence posts with a circular saw is easy and rapid. A hustler can point 300 a day

and there is less danger of spoiling a post. After this the posts are ready to be sharpened, and this is the hardest and most particular part of making a good post.

We have a 12-inch circular ripsaw mounted on a flat table. The saw is run with a two-horsepower steam engine connected to a 15-horsepower boiler. One man can run the saw and attend to the engine, as the fire needs attention but about once an hour. A gas engine would probaby do the work equally well. With the saw we sharpen the posts back about 18 inches, making a nice steady taper.

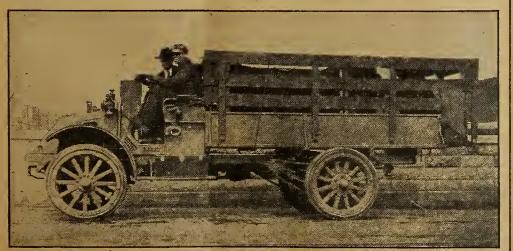
We can sharpen about 30 posts an hour on an average, at a cost of not over a cent a post.

Tractors in China

By Carlton Fisher

CHINESE land company last year A chinese and company and purchased an American-made tractor and complete outfit of plows, seeders, and tillage implements. With this outfit 600 acres of wheat were seeded and harvested. The same company has ordered four more tractors and additional machinery to use with them.

Horseflies and insect pests are so injurious to horses in parts of China that 50 per cent of the work animals sometimes die during the season, and the power problem is consequently a serious one. The Chinese are said by Consul Sammons of Shanghai to have now pinned their faith in farm tractors, another evidence of their willingness to



The same neighbors who said "a fool and his money are soon parted" when I bought this truck have since paid me many a hard dollar to haul for them





Raise High Priced Wheat on Fertile Canadian Canada extends to you a hearty invitation to settle on her FREE Homestead lands of 160 acres each or secure some of the low priced land in Manitoba, Saskatchewan and Alberta. This year wheat is higher but Canadian land just as cheap, so

the opportunity is more attractive than ever. Canada wants you to help feed the world by tilling some of her fertile soil—land similar to that which during many years has averaged 20 to 45 bushels of wheat to the acre. Think of the money you can make with wheat around \$2 a bushel and land so easy to get. Wonderful yields also of Oats, Barley and Flax. Mixed farming in Western Canada is as profitable an industry as grain growing.

The Government this year is asking farmers to put increased acreage into grain. Military service is not compulsory in Canada but there is a great demand for farm labor to replace the many young men who have volunteered for service. The climate is healthful and agreeable, railway facilities excellent, good schools and churches convenient. Write for literature as to reduced railway rates to Supt. of Immigration, Ottawa, Can., or to

M. V. McINNES, 178 Jefferson Ave., Detroit, Mich. W. S. NETHERY, Interurban Bldg., Columbus, O.

Canadian Government Agent.

Cushman Light Weight Engines

These are the all-purpose farm engines, for farmers who want an engine to do many jobs in many places instead of one job in one place. Built light, built right. Weigh only about one-fifth as much per horsepower as ordinary farm engines, but so well built and carefully balanced and governed that they run even more steadily and quietly. No loud explosions, no fast-and-slow speeds, like old fashioned heavy-weights, but steady and quiet running like automobile engines.

6 H. P. Hand Truck Outfit. Easy to pull around from job to job. Same engine used on Binder.

Also used on Corn Pickers r farm work

Before buying any engine ask these questions:

4 H. P. on Binder. It saves a team.

Attachments for any binder.

1. How much does it weigh? If it weighs more than 60 pounds per horsepower—why? The old-time argument was that heavy weight was necessary to keep it eteady; but if an engine is properly balanced. it doesn't need pig fron to hold it down.

2. Is it Throttle Governed? A throttle governor insures steady, quiet and economical power.

3. Does It have a good carburetor? The Cuehman has the Schebler.
Many manufacturers of farm engines won't pay the price for a good carburetor, as they think the farmer doesn't know the importance of it. Cushman engines are not cheap, but they are cheap in the long run. If you want an all purpose engine, that will run for years without trouble, write for our free Light Weight Engine Books.

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Throttle Governed-Steady==Quiet



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Live Stock

Wintering Fall Pigs By E. Quinn

FALL pigs kept in comfortable win-ter quarters and fed properly will grow as fast as spring pigs. Hogs need a warm place in the winter. Our best breeds have little hair on them to protect themselves from cold.

I have a basement barn I use to house my hogs in winter. I had 12 pigs in this barn last winter, and 12 in an outdoor pen. They were the same weight in the fall. The pigs kept in the basement barn weighed 50 pounds more in the spring than those kept out of doors.

I am building a hog house that will be warm. The doors are hung on hinges so the hogs can go out and in at will, and not much cold air can get into the house. I built a rough concrete feeding floor and a concrete feeding trough. My feeding floor is 12 feet square. I clean the floor frequently with a broom.

Cattle-Feeding Lessons

By P. F. Trowbridge

STEERS that are full-fed from birth should not be held beyond twenty or twenty-two months of age, because there is a decided falling off in the rate of gain. After this age the carcasses are overdone, there is an undue waste of excess fat, and the gain in weight in proportion to feed consumed is much reduced as well as the gain per day per steer. These are the results secured in a recent test at the Missouri Agricultural Experiment Station, in which some steers were full-fed while others received much less feed.

The steers which received feed insufficient for the greatest growth were most affected by such ailments as indigestion and pink eye, and their sickness was more likely to result in death. In fact, among more than a hundred steers in the experiments all the losses except one were among the low-fed animals of

Steers fed for long periods, such as three years and a half, on feed insufficient for the greatest growth did not seem to be able to digest their feed, and to make good gains when later put on full feed. Even a steer whose growth was greatly retarded for only one year never equaled in weight a steer of the same age which had been full-fed from birth, although when put back on full feed he made very profitable gains and developed a very choice carcass of beef. These results do not disagree with the common observation that thin steers often make the most profitable gains. Such feeders have usually not been starved so long or so steadily. They have usually had bulky feed which kept up the stomach capacity even though it didn't furnish a great deal of nourishment, and were very likely to have at least occasional large quantities of good nutritious feed, while the steers in the test were kept regularly on small quan-tities of food for long periods so that they seemed to lose the capacity to eat they seemed to lose the capacity to eat and digest as large quantities as they must handle to make the most profitable

gains Thrifty yearlings put on feed that is not sufficient, even to keep up the body weight they already have, continue to grow in height and framework even

when made to lose half a pound a day. Measurements of the skeletons did not indicate any decrease in the rate of growth for several months.

The most economical choice beef resulted from the use of a feeder weighing about 750 pounds so fed as to make a gain of 500 pounds. Such a steer will probably not quite top the market, but he should make the greatest possible profit to the feeder, and furnish an economical carcass for the butcher and housewife and meat of a quality to please the most exacting. The carcasses show that of this 500-pound gain 38 per cent is water, 49 per cent fat, and 12 per cent protein. When similar steers were fattened until they had gained another 500 pounds, or gone from 1,250 pounds to 1,750 pounds, the carcasses were much overdone, and the second 500 pounds was 76 per cent fat, 18 per cent water, and 5 per cent protein.

An Experience with Hogs By T. E. Lott

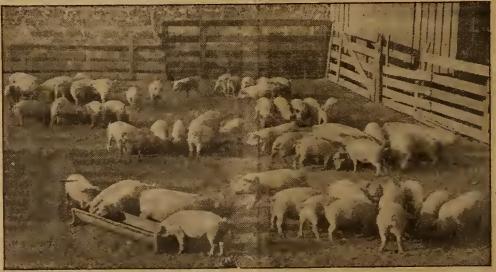
IN THE fall of 1910 I ordered a pair of registered Poland-China pigs, paying \$25 for the pair. I put them on oat pasture and fed them table scraps and skim milk and other farm products that were going to waste. I kept them on pasture as much as possible, oats in winter with some rape and Bermuda and crab grass in summer. When the pasture would fail I'd feed them collards there and other wastebles. lards, turnips, and other vegetables from the garden. I fed very little grain till the pigs were about a year old, then fed corn to balance the ration of legumes. To keep them in good condition while confined, I kept charcoal, hardwood ashes, and sulphur where they

When they were eleven months old I began to breed the male to my neighbegan to breed the male to my heigh-bors' sows charging a fee of \$1 for each sow bred. I also began keeping books to see if they paid their keep. About this time the gilt farrowed three pigs and continued to farrow a litter every five or six months. Several pigs died of cholera, worms, etc., but we succeeded in raising 44 during the four and one-half years that I kept her for a brood sow. Some of the pigs were sold at \$5 each at six to eight weeks of age, others were kept longer and sold for \$12.50 each, and others were fattened and made into pork. Some were kept for breeding stock. The pigs that were fattened brought the biggest money, and after deducting the cost of fattening there was more profit than were ing there was more profit than was realized from the pigs sold at weaning time, but there was more trouble tending them and risk of losing them by disease. I kept the male the same length of time as the sow, and bred him to 100 sows for my neighbors, then fattened both of them both of them.

Below are figures showing the cost of feed, etc., and proceeds from the sale of pigs (counting all pigs at \$5 each), and the value of the original pair at market value of pork.

•	
100 sows bred to male at \$1	220.00
Total receipts)
Cost of fattening 27.50	j .
Total expenditures	\$202.50
Profit	\$197.50

Besides the above profit I secured a good market for waste products and grain raised on the farm; for instance, we raise corn at a cost of from 14 to 25 cents a bushel, and I charged myself a bushel for corn and made more than if I had sold it at market price. leaving this out of consideration, I made practically 100 per cent on the investment of \$200 in pigs and feed.



Fall pigs will grow rapidly if they are fed properly and have warm quarters. The owner of these pigs feeds them out of doors on mild, sunshiny days

Forage and Indigestion By W. P. Shuler

OF THE various causes of acute indigestion occurring in domesticated animals, forage, in the green as well as cured stage, is probably the most predominating factor to be reckoned with in this country.

Predisposing causes of this trouble are as follows: Animals weak or de-bilitated from other disease, close housing during the winter months, and an exclusive dry ration or a sudden heavy exclusive dry ration or a sudden heavy feed when very hungry on a different food than that to which the animal has been accustomed. A practical illustration of the above, and one of the most common, is that of an animal in winter time receiving wet or badly cured forage, or in the summer being turned out on a field of green vegetation; for example, peas, beans, clover, cane, or corn when hungry, or when the above is covered with dew or growing rapidly.

The question is often asked, and variously answered, "Why is it that cane or alfalfa will cause indigestion and consequent bloating or gaseous disten-

consequent bloating or gaseous distention when the animals eat much of it standing in the field, while the same feed if cut and allowed to wilt a few minutes may be eaten by stock with safety?"

Why this is cannot be completely explained in all cases, but it is usually considered to be as follows: Rapidly growing vegetation contains many dif-ferent kinds of "ferments" which trans-fer the nutrition absorbed by the plants from the air and soil into plant food. These ferments are most active when there is most moisture present, consequently if the vegetation is allowed to ilt before being taken into the stomach these active substances are partially destroyed and are thus unable to cause much fermentation.

In the feeding of cured forage, we do not encounter this trouble, and our gas production there is from an accumulation of food which the bowels have not the strength to pass on. It will be thus seen that though we have to deal with bloating in both cases, with the cured feed it is the result of indigestion more or less chronic, while with the green feed it may be said to be the Thus the methods of treatment must differ.

Causes Differ Greatly

As the substances causing the trouble are different, so will the symptoms vary in proportion. Indigestion and bloating on cured forage appears slower, and is first noticed by a loss of appetite and an appearance of extreme fullness coupled with non-activity of the bowels. This may persist for a day or two before the accumulated contents begin decomposing with an evolution of gas. The rumen, or first division of the paunch, then begins to distend greatly, pushing out between the last rib and hip bones, causing great uneasiness.

Pain and gaseous distention quickly follow the indigestion of green feed, sometimes occurring in a very few minutes with the same symptoms as noted. This extreme distention of the rumen causes a paralysis of the muscular walls, with the resulting inability to force the food either on into the intestines or back into the gullet, hence rumination ceases and the animal is said to have "lost its cud." Extreme depression is noted, the breathing is short and rapid, and the pulse weak.

Treatment must be prompt in all cases to be effectual, and the following methods are usually successful.

Stimulants of various kinds, such as ites with the same symptoms as noted.

Stimulants of various kinds, such as alcohol, ginger, cayenne pepper, spirits of ammonia, camphor and turpentine equal parts, or strychnine hypodermi-cally must be given to strengthen the heart and cause the paunch to renew its activity.

Agents that will check further fermentation, such as eucalyptus, carbolic acid and camphor, oil of cloves, oil of juniper berries, chloral hydrate, or even common salt must also be used promptly, and then followed with laxatives such as Epsom salts or raw linseed oil.

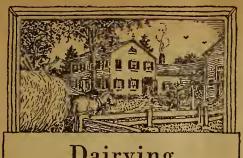
such as Epsom salts or raw linseed oil.

In extreme cases a trocar should be plunged through the belly wall at the point of the greatest distention to facilitate the escape of gases. When an instrument of this sort is not at hand, an incision may be made with a knife, two inches long, and the lips of the wound held apart with a pair of scissors thrust into it and there partially opened.

A block of wood two inches thick and a foot long may be placed between the

a foot long may be placed between the jaws to produce belching or regurgitation of gas and food.

The above trouble may be largely avoided by wise care and management regarding the feed as to time, amount, and quality. Thus the painstaking husbandman need have little fear of the above troubles, since neglect is their chief forerunner.



Dairying

Making American Cheese By R. Robinson

[Note: This article, which gives directions for cheesemaking, supplements "Cheese for Market" appearing in a former issue.]

WHEN you have everything ready, try out your heating arrangement the day before you start to make cheese, making sure there will be no balk. For milk is like time and tide: it waits for no man, but will go on getting sour. Be sure your night's milk has been kept sweet; then mix night and morning's milk together in a vat and warm up to 88 or 90 degrees, holding the thermometer bulb in the milk while you read the temperature.

temperature.

If there is a lot of hot water under the milk, either shut off the heat before the milk is at full heat or else let it run off. Too much heat will cause tough, stringy curd in the bottom of the vat.

Measure 15 drops of coloring for every 100 pounds of milk, mixing the coloring with half a cupful of water to make more bulk. Then stir into the milk. Be very particular, for two or three drops extra in a small quantity of milk will make the cheese too highly colored, and it does not look well, though it has no other effect.

Then in an ounce measuring glass

it has no other effect.

Then in an ounce measuring glass pour out a little less than half an ounce of pure extract of rennet for each 100 pounds of milk, or at the rate of four ounces to 1,000 pounds of milk. Mix with four or five times as much water to make more bulk, and stir into the milk two or three minutes so as to mix thoroughly. Then cover with cloth to keep out cold air, let stand twelve or fifteen minutes, when it should begin to thicken like cream. Let stand twelve or fifteen like cream. Let stand twelve or fifteen minutes longer, or till it will break over the finger like a thin custard. Then cut.

Proper Use of Rennet

When you pour the rennet into the milk, note the exact time. Then if you are sure the night's milk was perfectly sweet, half an ounce or a little less of rennet should begin to thicken the milk in twelve to fifteen minutes with the milk at 90 degrees. Your rennet may be weaker or stronger than standard, however. If the heat is greater, the milk will thicken more quickly with the same amount of rennet; also, if the milk is old or well advanced toward being sour, it will thicken more quickly in proportion to how near sour it is. If very bad, it will be thick before you are through will be thick before you are through stirring. After two or three experiences you will know just how to vary the quantity of rennet to thicken the milk in twelve to fifteen minutes. Then use that quantity to each 100 pounds of milk every day. When ready to cut as indicated above,

insert the horizontal knife in one corner of the vat, letting it down in such a way that it will cut instead of mashing. Bring it to an upright position and cut the full length of the vat. Then turn on width of vat and cut back, and so on till the mass has been evenly cut without withdrawing the knife. Then lift knife by leaning it back so it will cut its way

Now take the perpendicular knife and, beginning in one corner, repeat the performance from end to end of vat; then crosswise. You now have the curd in cubes three-eights of an inch square all through the vat. Go on cutting with the perpendicular knife, lifting it out each time you cut across the vat until the pieces of curd are about the size of corn-kernels.

Changes in the Curd

Then start the heat under it and stir with the hands very gently. Also, when cutting avoid any quick slashing moves, for the curd is so tender it will be wasted. Keep stirring till the thermometer shows at least 102 degrees. The range is between 102 and 105. Shut off the heat if it is likely to run up afterwards, but let the warm water remain underneath. It will help to keep up the temperature, as the curd should not be allowed to cool much, and cover with a cloth in cool weather. Occasionally apply heat if needed.

In a short time the curd will begin to

In a short time the curd will begin to feel firmer; then it will squeak between the teeth. Have a poker or other piece

of iron in the fire, and when hot enough to fry, but not red-hot, squeeze a piece of curd in the hand and touch to the hot iron. If you see threads about an eighth of an inch long when you pull it away slowly, separate curd from whey by dipping curd and whey together into the sink with a flat-sided pail. The whey will run off through the hole in the bottom of the sink and may be saved in any way convenient. Stir the curd with your hands to prevent matting. It should be stirred at intervals while in

the vat, for the same reason.

When the curd is well drained, try the When the curd is well drained, try the hot iron again, or as often as necessary. It should show fine silky threads about half an inch long, which then snap and fly back. Now sprinkle on a quarter pound of salt for each 100 pounds of milk used, or 2½ pounds a thousand. Stir well a few minutes to work the salt into the curd; then it is ready for pressing. This is the stage where cheese is ing. This is the stage where cheese is made for better or worse, so it is well to remember these principles: It is the acid working together with the rennet that causes the curd to show threads on a hot iron. When you first try it the curd may just fry, showing no signs of threads. After a while, perhaps an hour or two after the heat has been shut off, threads will begin to show; or there may be threads a quarter of an inch long or more by the time you have the curd heated, which should take about half an hour from the time you get through cutting; that means your milk was too far advanced toward being sour. If it shows no threads for an hour or two, it means the milk was nice and sweet, but in any case separate the curd from the whey as quickly as you can when you see threads an eighth of an inch long. Then you can wait for enough change to show half an inch before salting. [CONTINUED IN NEXT ISSUE]

A Wood-Hooped Silo

By C. P. Gibson

ONE hundred dollars and little labor has built durable wooden silos on many New York farms. One has to be a judge of lumber and a carpenter of considerable skill to erect a wooden silo successfully. The sides of the silo have to be air-tight, or the silage will spoil. Two thousand feet of lumber, hemlock, pine, or other inch material, will be needed for the staves of a silo 10 feet in diameter and 31 feet high. These staves should be five or six inches in width, and any multiple of three feet in length to reach the hoops, which are three feet apart. three feet apart.

Three hundred feet of material is required for the hoops of a silo 10 feet in liameter. The hoops used are made of ¾x3-inch elm strips beveled at the ends for lapping.

Here is the method used in building

Make a concrete foundation a little make a concrete foundation a little larger than the base of the silo, the same as for any stave silo. Then make the hoops. Build a platform of plank and, using a board as a compass, describe a chalk circle the same diameter as the silo. Nail down 1-inch boards along the chalk line and hew to that line. Hew the boards to a circle first, then nail down. In this way a form is then nail down. In this way a form is made. Begin by placing hoop material against the form. Nail blocks on the outside to hold the hoops in position. A cant hook and a short piece of chain are useful in bending the hoops around this form. Use No. 6 nails for the first and second ply of hoops, and No. 8's for



One must be a judge of lumber and a carpenter of skill to erect this silo

the third. Lap the beveled ends of the hoops and fasten them with shingle

In erecting, use four boards placed vertically to act as supports for the hoops. These boards should be marked every three feet to show where the hoops will come. One or more of these sup-

ports should be plumbed and fastened securely. Measure from the bottom of the hoop to the center of the hoop above. Fasten by stay lath to the barn to

Then begin work at the place where the door will be and mismatch the sides. Put planks across the hoops for scaffolding. Twenty-two inches is a good width for the door. A 2x4 should be set in between every hoop on each side of the doorway to make a double jam for the doors. Put up a few staves, then put up a strip of two-ply tarred roofing paper between the first and second lay-ers of siding. Eleven rolls of roofing paper will be needed for a silo 10 feet

in diameter and 31 feet high.

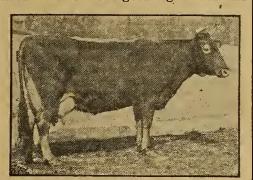
The roof of the silo is made by cutting 10-inch boards to a point. Nail the points of the roof boards to an 8-inch wooden disk placed at the center of

the roof.

Dairy Cows Need Shelter By John Coleman

UNLIKE a steer or cow of the beef breeds, a dairy cow is not protected from cold by a layer of fat. This is the reason that many good dairy cows shrink in their milk production at the beginning of winter.

Cold rains, especially, are a common cause of this, and it is more important to shelter dairy stock at such times than in cold dry weather. Dairy barns need first of all a good tight roof and



Dairy cows have little fat to keep them warm, hence they need shelter

a wall construction that will prevent drafts. Good drainage is also impor-tant, as it helps to keep the interior

Calves Have Convulsions

By Dr. A. S. Alexander

"I HAVE lost two calves within a week," writes a California dairyman, "both in the same manner and both dying within half an hour after being affected. The first symptom in each case was a distressing call, and as soon as the calf was untied it would rear up and run about as though blind. When held it would seem to be in great pain. The legs would twitch and jerk, and when exhausted the animal would lie down rigid and move the eyes as though

"The neck would be hard and stretched out, with the head thrown back. Both of these calves were being fed on whole milk, the latter one suck-ing the cow. The first calf was three weeks old, and the latter one six weeks. I have had considerable experience in raising calves, and have always raised them. But this disease, if it is a disease, is new to me."

The calves died of convulsions or fits induced by indigestion. In many instances that have come under our observation the cause was too fast drinking of milk from a bucket. A sudden spasm of the gullet results, and if very severe it proves fatal. In other instances, the fits attack now and then, and at last an attack proves fatal, or the calf may gradually get over the trouble.

On opening the calf it is common to find tough curds of milk in the stomach. It is rare indeed that a calf can be saved when severely attacked. In fat, heavily fed, very thrifty calves apoplexy is the true cause of death when the attack comes on suddenly and quickly kills. Prevention is all important. Calves should be made to drink from self-feeders with nipple attachments, or be made to drink very slowly.

Also, it is best to feed small quanti-

ties of milk three times a day instead of large quantities twice daily. The bow-els should be kept active, and the calves should have an opportunity for exercise every day. At the slightest sign of sickness give a two to three ounce dose of castor oil shaken up in milk, if the calf is three or four weeks old, and less if it is younger.

If a fit threatens, place cold wet com-presses on the noll of the head and give a tablespoonfy of brandy or other stimulant in coffee. Keep calves from sucking each other's ears. Stanchion them at milk-feeding times, then feed some meal and keep them stanchioned for an hour afterword, and they will for an hour afterward, and they will not be so likely to suck.



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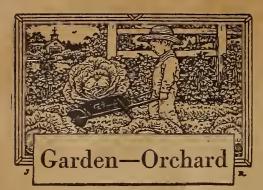
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Shaking Up the Garden By E. McGuckin

IN MANY a garden there are spots which remain hard, tough, and difficult to get into easy working condition throughout the season. The cause is usually a pocket of impervious subsoil which holds the water too near the surface

face.
Frequently all that is needed to correct such unfavorable spots is a dollar or two used for blasting material with which to loosen and pulverize the sub-

soil underlying them.

Blasting of soil is nothing more than intensive tillage that reaches three or four feet into the ground. Nowhere is intensive tillage more needed than in gardens. Pick out a time this summer gardens. Pick out a time this summer when the ground is dry (the drier the better), and place small charges of farm powder two and a half, three, or four feet deep, and six to fifteen feet apart. You want the charges so placed, and of a size so that they will not blow out, but will only heave or swell the surface over each shot, and reach all the ground between. the ground between.

It will not hurt the growing plants to

blast right under them when the ground is dry. If the blasting can be done just before a hard rain, the blasting will produce more immediate benefits than if rain does not follow soon. If you prefer to wait till the crops are off, do the

work in late August or September, be-fore the fall rains arrive.

One good blasting in a garden should be of as much good as several thorough spadings to a depth of fifteen inches. For field and orchard crops the same ror neid and orchard crops the same intensive tillage is equally as valuable. You can find out all about it for yourself by trying small plots in representative parts of the fields. One 50-pound box of farm powder ought to subsoil more than an acre, and if you divide the acre up into several small experimental plots, where you have corn, potatoes, grass. up into several small experimental plots, where you have corn, potatoes, grass, trees, wheat, etc., and watch the results carefully, you should get some valuable knowledge. As with any other kinds of tillage, the results are not immediate, but come about through the lapse of months and seasons. If you can get leguminous cover crops planted in the fall on the blasted ground, the benefits will be much larger in proportion.

Sprayer Pays Its Way By J. T. Raymond

CHARGING 10 cents a tree, an enterprising New Hampshire farmer sprayed last season nearly every small orchard in his town. His own orchard was not a large one, and would not bear the cost of a power sprayer. He bought an outfit, engine and all, planning to make it pay by renting it to neighbors, or by doing their work for them. He fixed upon 10 cents a tree as a fair price, but varied this charge if trees were very small or very large. He believed he could get more work by quoting a small sum per tree than a charge by the hour. There were people by the dozen who had only to be asked once. Another year he expects to do a still

Another year he expects to do a still larger business, and ultimately to have a considerable income annually from

this source.

This is the situation which created the opportunity. Just as New England is known for its back-yard vegetable gardens, so also might it be noted for its home apple orchards. Even houses on small lots have their apple trees, while on the outskirts of villages are places having ten, twenty, fifty, sometimes as many as one hundred trees. The owners of these follow occupations other than farming. They possess no equipment for spraying, and know little concerning

the preparation or application of sprays. What with the brown-tail, the gypsy moth, and the tent caterpillar, the past ten years have been a baptismal period for New England fruit growers. Those who did not learn that spraying was absolutely essential simply lost their trees.

This farmer solicited a few contracts

and secured most of the others while on the way to and from orchards. He found absentee owners of farms, including city owners of country places, glad to employ him. He did some spraying for other farmers. One horse pulled the rig. In the orchard the farmer operated the outfit unassisted.

Working Rhubarb Overtime By F. W. Orr

ALL too few farm families take advantage of fresh rhubarb as a winter table delicacy. It pays well to have several hills of lusty-growing rhubarb plants all ready for forcing in the cellar when heavy freezing weather arrives. The plan in brief is this: Dig the roots carefully just before the ground freezes, handling the plants carefully to prevent injury. Place the plants in a box outinjury. Place the plants in a box outdoors where they may be left until frozen solid. If placed on the ground they may freeze fast so that the roots may be injured when wanted for forcing in the cellar. When the roots are well frozen, take them into a cellar where the temperature averages about 50 degrees Fahrenheit, or a little higher. Set the roots close together in higher. Set the roots close together in a bin or box, and cover with about four inches of soil. The box should be placed in as dark a corner of the cellar as possible. The soil around the roots should be moistened slightly, and in three or four weeks the shoots will appear and will continue to bear plentifully for eight to ten weeks. Half a dozen vigorous roots will provide enough rhubarb for the average-sized family.

A Twofold Use for Straw

By R. Pulliam

QUALITY is a big item in potatoes for table use, and there is now a greater willingness developing to pay a premium for high-quality tubers. Some German farmers of southwestern Illinois are now making use regularly of their old strawstacks as a cover for their potatoes after planting. The potatoes after planting. their old strawstacks as a cover for their potatoes after planting. The po-tatoes are planted in rows two and one-half feet apart, and after covering moderately with soil the straw is spread evenly at the rate of about 30 loads per

At present the straw is hauled and then dumped off in piles over the field, and then spread by hand, but by the use of a straw spreader such as now is in use on large grain ranches the operation of spreading the straw could be done in very much less time.

These German farmers have found that they are practically sure of a good potato crop every year, as the straw holds the moisture from evaporating, and there is always plenty of moisture remaining to mature the crop and pro-

duce much heavier yields of tubers. By this method of culture as high as 400 bushels an acre of fine quality potatoes have been grown by the Germans practicing this method. Not only has there been a gain in yield, but straw potatoes have earned a reputation for high and uniform quality among hotel keepers in St. Louis where the potatoes have been marketed. marketed.

After the crop is harvested, a portion of the straw is usually hauled to the barnyards or feedlots, where it remains until sufficiently decayed to be spread with the manure, and a portion of the straw is plowed under where the potators are processed.

toes were grown.

A MOUND of dirt placed about the base of the young trees, a foot high, packed firmly, will generally prevent damage from mice. A cylinder of tarred paper a foot wide tied around above this will generally prevent all damage from rabbits.

Bermudas in Michigan

By Allen J. Titus

AFTER moving from Ohio to Michigan, Charles Webb became much interested in the onion-growing operations of the Rice Lake marsh regions which have become noted for the excel-lent quality of Bermuda onions. He became convinced that the quality could be greatly improved and the profits ac-cordingly increased by growing the plants in hotbeds or greenhouses from seed, and thus be able to set the plants when most onion growers were planting

their seed.

The first year, Mr. Webb sowed the onion seed in an artificially warmed shed room, not having hotbed or greenhouse ready. By this plan he had over 20,000 fine, stocky onion plants ready to set at the earliest moment the ground was fit. was fit. From one plot of ground, 25x100 feet, he produced 21 bushels of onions of unusually fine quality which sold for \$1 a bushel, besides 40 bushels of second quality onions which sold for 50 cents a bushel.

The present season he started enough seed in the winter to plant an acre. He is now satisfied that his system is far more satisfactory than sowing the seed in the open field and having a much harder fight with weeds. After setting his onion plants Mr. Webb offers a prize for each weed six inches high that can be found in his onion field.

Tile Trap for Rabbits

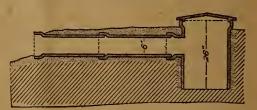
THE rabbit trap illustrated originated with J. M. Walmsley of Kansas, and its practicability is vouched for by the U. S. Department of Agriculture. Mr. D. E. Lantz of the Department describes it as follows:

D. E. Lantz of the Department describes it as follows:

A 12x6-inch tee is set with the long end downward, and buried so that the six-inch opening is below the surface of the ground. Two lengths of six-inch sewer pipe are then connected horizontally with the opening. Soil is placed over the joints to exclude light. The upright tile should be fitted with a tight removable cover—Mr. Walmsley uses old harrow disks for the purpose.

The projecting end of the small tile is surrounded with rocks, brush, or wood, so as to make the hole look inviting to rabbits, and that they may appro-

ing to rabbits, and that they may appropriate the den as a place of concealment and shelter. A number of these traps in various places, and especially in the vicinity of the orchard, have kept Mr. Walmsley's farm comparatively free of rabbits. Rabbits occupy these tile traps,



go in or out at will, and may be cap-

go in or out at will, and may be captured when desired.

Whenever Mr. Walmsley visits his traps he is accompanied by a trained dog that locates the trapped animals. The cover is lifted from the upright tile and the rabbit captured by hand; if it bolts from the side opening it is caught by the dog. Or a short pole fitted with a five-inch wooden disk may be inserted in the side opening to prevent escape.

in the side opening to prevent escape.

These traps are especially suitable for open lands and prairies where rabbits have few natural hiding places.

Grading Fruits

By R. E. Rogers

OME weeks ago I saw a farmer drive up to a grocery in our town and unload three or four bags of apples. They were Wealthies, and there were some good ones in the bunch. Yet he only received 50 cents a bushel for the lot. Part of the reason why he didn't get a real price which at that time was about a dollar per bushel, was that he hadn't sold the fruit before he came into town with it. But the principal reason was that all the fruit had to take the price of the poorest in the lot.

He could have had probably three or four bushels of first-class fruit out of the lot if he would have taken the time COME weeks ago I saw a farmer drive

four bushels of first-class fruit out of the lot if he would have taken the time to grade the apples in two sizes. The remainder of the lot would have brought no less per bushel, and the better ones would have paid mighty high for his time. A good many farmers are getting to think of this, and it pays them. The time that it would have taken would be possibly a half-hour. Suppose that there were three bushels of good ap-ples: the difference in price would have ples: the difference in price would have been \$1.50. That is at the rate of \$3 an hour for the farmer's time. Surely, he couldn't have been in such a hurry that he wouldn't have stopped to make money that fast.

I remember a particular tree of harvest apples that I picked and sold some years ago by themselves. The tree yielded eight bushels of salable fruit. All told, at the regular ungraded price, they would have brought \$4. I picked them over carefully and sold six of the crates or bushels for \$6, and the other two at 50 cents each. In this case there ou cents eac was also a gain of \$3 for a very small amount of time—I should guess that it

took me twenty minutes.

took me twenty minutes.

There are some kinds of fruit that it will pay to make three grades of. Vegetables come under this head also. In onions there is sometimes a crop that will warrant this. We always have two grades, and it always pays. The ones that go through the screen or sorter sell for less, of course, than the better ones, but if they were left in the better grades the whole amount would lose in value a lot more than they would gain by weight or bulk. I remember a few years ago having about 125 bushels of smaller onions that were less than one-fourth inch in diameter. These sold to a Cleveland commission merchant for 35 cents a bushel. The regular price for a screened onion was about 60 price for a screened onion was about 60 cents at that time. The onions that these were sorted from were loaded loose in cars and were better in every way than they would have been if mixed with the small ones. The smaller stuff, anyway, in many cases simply fills the spaces between the larger fruit or vegetables. Of course when produce is sold by weight it matters little about

The Next Issue News

Volume 2

Farm and Fireside Editor's Office

Number 1

How Rockefeller Gives Money

Which is harder, to make money honestly or to give it away intelligently and helpfully? John D. Rockefeller, who has made more money and given more away than any other man in the world, has written an article for FARM AND FIRE-SIDE entitled, "The Art of Giving." For a number of years Mr. Rockefeller gave money here and there as appeals presented themselves. Because he almost worked himself to a nervous break-down by trying to investigate all of the appeals, he adopted his present plan. This article will appear in the next issue of FARM AND FIRESIDE—the January 6th number AND FIRESIDE—the January 6th number.

When You Plan Your Work

If you have wondered how you can increase the amount of work you do without working longer hours and using more equipment, you will enjoy the experience of P. C. Grose, which will appear in the next issue. He tells how he does more work and makes more money than he formerly did.



He gives away fortunes

So Tenants Can Own Farms

tenant who makes good and remains on one of the Cavanagh farms good and remains on one of the Cavanagh farms for five or six years will have money and credit enough to buy a farm for himself. He will be able to do this if he does as well as the Cavanagh tenants have done since the farms were tile-drained and heavily fertilized five years ago. It will be possible for him to buy a farm of his own, equip it properly, and do a lot of other things because—we'll let Harry M. Ziegler tell about it in an article in the next issue—the January 6th number.

Taking the Worry from Washing

After experimenting with various methods of washing recommended by friends, Alta Booth Dunn evolved a system that takes the worry out of washing. She describes it in detail in the next issue of FARM AND FIRESIDE.

Makes Real Pictures with Seeds

A woman in California makes with just plain ordinary seeds pictures of people and animals that can hardly be distinguished from oil paintings. Mrs. Todd Carson explains how it is done in the next issue. A picture of a rooster made of seeds is shown.

To Avoid Paying Bills Twice

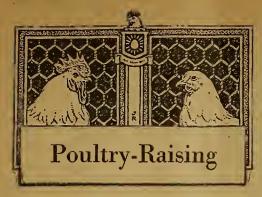
A farmer paid cash for \$80 worth of wire fence, and took it home. Later he received a bill for the fence. The farmer tried to get out of it, but there were no witnesses, and he had to pay it. You won't have to pay a bill twice if you follow the plan of R. E. Rogers which is given in the next issue.



This tenant soon bought a farm



Scene Blue Envelope next issue



Concrete Poultry Vessels

By A. L. Root

THE ordinary metal and wooden vessels for holding water in the poultry pens or the outbuildings are a continued source of annoyance. Metal containers rust and wooden ones rot, and both are soon out of commission. But my concrete vessels are permanent affairs, and can readily be made by anyone during

leisure hours at a very small cost.

For this purpose I prefer one part cement, two parts sand, and four parts very fine stone or gravel. The gravel and sand can be taken from the creek bed, provided it is washed thoroughly. I clean the sand and gravel by spraying with a hose, or put on a screen and with a hose, or put on a screen and wash under the pump.

I make poultry pans of various sizes to use for water and moist food and as bath tubs for the pigeons. I use discarded dishpans as forms for the larger

vessels, and other cooking utensils for smaller vessels. It is necessary to have two forms for each piece to be constructed—one smaller than the other.

The concrete vessels must be thickenough for the intended purpose. Exposure to weather and changes will affect thin dishes. After the forms are ready, mix the concrete, and pour a porready, mix the concrete, and pour a portion into the larger forms. Then set the smaller pans down into the concrete the smaller pans down into the concrete mass deep enough to give the desired thickness for the base of the concrete vessel. Now something must be provided so that the small pan will remain in the position desired. I punch nails into the small pan in positions that will hold it when it is set into the large pan. When the small form is fitted into the large one and the concrete base is ar-

large one and the concrete base is arranged, then pack more concrete down between the sides and tamp it firmly. Overflow the material and let it set till

overflow the material and let it set till hard. Remove the forms and the concrete vessel is the result.

If an outlet is desired in any such vessel it can easily be provided. Make holes in both forms to correspond, opposite each other, when they are in the exact position you desire for the finished work. Before placing the concrete between the sides fix a piece of broombetween the sides fix a piece of broomstick into the holes and then fill in the concrete. When hard, remove the stick, which should be wedge-shaped, then no difficulty will be experienced in removing it

To make stepping stones or foundation blocks of concrete to use for any purpose, I simply fill a tight box of the desired size and shape with the concrete mixture and let it set.

All Breeds Have Loafers

By B. F. W. Thorpe

A TRAP-NEST test of almost any flock of 50 to 100 hens will show that there are several hens among them that never lay an egg, and a few others that lay only a dozen or two eggs during the entire year. Generally such barren hens and those almost barren look to be in the pink of laying condiso iar as the appearance

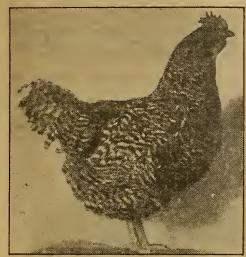


This White Leghorn spent a full year under trap-nest conditions, but never paid an egg's worth of board bill

and earlobes remain a healthy, scarlet color, the appetite is good, and many an owner of such loafing hens considers them among his prize layers. Just here is where special hen knowledge is a valuable asset to the poultryman. If trap-nesting is not done, watch for the

effects that follow heavy laying. If the hens' feet and shanks remain yellow—if the breed normally has yellow legs month after month, spot such hens as "loafers." The toe nails of loafers will remain long. They will begin to molt in midsummer — unless they have hatched and brooded chicks. Their pelvic bones will remain close together— not over a finger's breadth between them. There are other less evident marks of the loafer that the expert will detect.

The two hens here pictured occupied trap-nest pens during an entire year, and neither hen was ever found in a trap nest with an egg to show for a year's feeding, nor did these hens lay



For twelve months this Barred Rock was confined in a pen with trap nests. She loafed through the year without an egg to her credit

outside the trap nest, although they ate heartily and looked the part of heavy layers throughout the year.

Higher Ground for Poultry

By E. L. Vincent

THE heavy losses in chicks on account of the cold, wet weather last spring established one fact, and that is that we must get our birds on higher and dryer ground. If there is anything that means death to poultry it is wet and cold. We used to count on not less than 25 per cent of loss under such circumstances before correcting the trouble, and many times the fatality mounted even higher.

Runs which are on the level with land over which surface water makes its way or settles, or houses similarly located, together with their yards, are the bane of the poultryman. In very many if not in all cases it is possible to lift these quarters up out of the damp and so save

a large percentage of loss.

It may be we will be compelled to go some distance from the dwelling house to find our better location, but we might better travel 20 or even 50 additional rods several times a day, than to have the heart taken out of our flock by damp and cold. But if there be no land which and cold. But if there be no land which is naturally higher than the level near the house, we may frequently raise a little spot by hauling in earth or gravel and draining under the houses, runs, and surroundings with tile. In many cases a rise of a foot or less would make a great difference in our birds' health. Then, as the surface earth may become Then, as the surface earth may become infected by long use, we should remove a few inches of the top every year and haul it away, replacing it with fresh earth or gravel. If pounded down well, even a clay surface could be shoveled off and made clean from time to time, thus insuring a greater degree of health. I am satisfied that were this done, and other measures taken to remedy low, damp quarters, it would mean many thousands of dollars more per annum health is concerned. Combs, wattles, for the poultry keepers of this country.

Fish Scrap vs. Meat Scrap By F. W. Orr

EXPERIMENTS carried out by poultry experimenters indicate that the future demand for fish scrap as a source of animal protein for poultry will steadily grow. Fish scrap ordinarily can be purchased for about \$10 a ton less than beef scrap. Poultrymen who are most successful in getting a heavy egg yield from large flocks of layers now make from one part in eight to one part in ten of the grain ration fed of beef scrap or a combination of beef scrap and sour milk. At this rate of feeding for eggs and for growing young stock there is a nice saving in substituting fish scrap for beef scrap as the principal source of animal food. However, it has been shown by some experiments that a combination of one half of beef scrap and one half of fish scrap will give a slightly higher egg production than all fish scrap. Have any FARM AND FIRESIDE poultrymen had any experience along this line? If so, tell us about it. future demand for fish scrap as a source

Watch the Bird's Comb

By Amos L. Gridley

THE successful experienced poultryman only needs one glance at your pen of chickens to enable him to make a good estimate as to the health condition of your flock.

A bright red comb, clear eyes, and an appearance of alertness is seldom seen except when a chicken is enjoying the best of health. Occasionally it is true that hens which are overfat and in danger of apoplexy may carry with them good health certificates which are not deserved.

When the comb turns from its natural bright red color to purple, or an even darker shade, the caretaker may even darker shade, the caretaker may expect ptomaine-poisoning or other form of poisoning, indigestion or liver trouble, and if the comb assumes a light color, except when the bird is molting, the poultryman should suspect bowel trouble or tuberculosis. One of the first things the beginner should study is the appearance of health or disease as indicated by the appearance of the comb. cated by the appearance of the comb, eyes, carriage, and attitude of his birds when in vigorous health and when out of condition.

Oat-Sprouting

By J. T. Raymond

Z. C. INGERSOLL, a Connecticut poultryman, employs a method of oat-sprouting which he finds both practical and economical. He uses discarded lard tubs bought of grocers for a nickel apiece or less. These tubs are large, holding about 50 pounds. He cleans a tub thoroughly, and then bores a hole through the side, as near the bottom as possible, which he fits with a wooden plug. Several tubs prepared in wooden plug. Several tubs prepared in this way and burlap bags make the complete equipment.

He fills a tub, the plug being in, with oats of the proper quality, and covers them with water from which the chill has been removed. After the oats have remained thus for four or five hours, he removes the plug, draining the tub. Twice a day thereafter he sprinkles the oats with cold water, until they develop heat and begin to sprout. Growing too heat and begin to sprout. Growing too large for one tub, the sprouting oats are divided between two.

are divided between two.

Each morning the oats are turned from one tub to another, care being taken to pull and tear them well apart in the process. If they appear to be heating too much he inserts the plug and cools them off with cold water, then takes out the plug and drains. He has oats fully sprouted and ready for the hens in six to ten days.

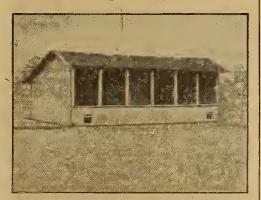
In winter he covers the tubs with burlap bags, and uses water with the chill taken off for sprinkling.

On a large commercial poultry farm in Massachusetts this method has been adopted and has proved very satisfac-

adopted and has proved very satisfactory. This farm uses dozens of tubs. Every day the oats in each tub are turned and, if necessary, cooled.

Poultry House for Dixie By J. K. Crockett

THIS type of poultry house, having the entire front open except two feet enclosed across the lower part, is now becoming quite popular among progressive poultrymen in latitudes south of the Ohio River, or in sections where the weather is correspondingly mild. Where



the front is open to this extent it is more necessary that the other three sides of the building should be made practically air-tight; and if the building is over 20 feet long, there should be tight partitions from 16 to 20 feet apart to prevent draft. A house of this character provided with storm-proof curtains gives satisfaction even where the temperature sometimes drops as low as tains gives satisfaction even where the temperature sometimes drops as low as zero for a short period. For by means of the curtain, a portion of the scratching space can be protected from wind and still allow the sun to get in in some one section of the building.

One excellent point in regard to these open-front buildings is the large amount of fresh air that is supplied during the heated season when poultry kept in many solidly built houses are suffering from the heat.

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"Then shalt thou call, and the Lord shall answer; thou shall cry, and He shall say, Here I am"

Miracle Mary

A Story of Faith That Won Over Crushing Odds

By JOHN A. MOROSO

HE little door in the south wall of the criminal branch of the supreme court opened and a Central Office detective strode into the room, his right wrist handcuffed to the left wrist of a

his right wrist handcuffed to the left wrist of a burglar who trailed a step behind him.

The case of the People against Joseph Condon, alias "Little Joe," alias "Idaho Shorty," charged with burglary, was called for trial, and the man manacled to the detective was the defendant. Shorty was, as his alias implied, a dumpty bit of man. He was about thirty-five years old, short and thick of neck, clean-shaven and poorly dressed. His legs twinkled in a trot as he kept up with the stride of the tall and angular "bull" from police headquarters.

Within the railing before the judge's dais the steel leash was slipped and the prisoner took a chair beside his counsel.

The detective sat directly behind

The detective sat directly behind him, ready to trip or fell him if by any chance he should make a break for liberty.

The case was of no particular in-

The case was of no particular interest and there were present more court attendants than spectators. A group of talesmen from whom a jury would be selected crowded the railing impatiently.

Shorty glanced about the room cautiously, his little blue eyes scanning the faces of the men called for jury duty. He did this furtively and fearfully, for the moment was one of dire peril to him. Twice he had been convicted of burglary, and a third conviction would mean a life term in Sing Sing. The court and society would accept him as a confirmed criminal, the rule of civilization for burglars, as expressed in the courts, being three strikes and out.

in the courts, being three strikes and out.

Shorty's counsel, Miles Gray, a fox-like person, shuffled some papers on the table before him and shiftily studied the talesmen. His lean and sallow face was marked with the drawn lines of the uncaught crook. His fishy eye and thin, cruel lips gave hint that his mind was as a covered well, reeking, miasmatic, murky.

ing, miasmatic, murky.
Finished with his effort to size up the talesmen, Shorty peered into every corner of the courtroom as if every corner of the courtroom as if in the hope that his eyes would rest upon someone the sight of whom might mean promise of deliverance. Gray, observing his client occupying himself in this manner, leaned over and whispered:

"Ain't she here yet?"

Shorty shook his head and hunched his shoulders uneasily.

"You better plead guilty and ask for mercy."

for mercy.

"Nothing doing."
"She's the only witness you got."
"She'll be here."
For the third time in his career
Shorty settled himself in his chair
in that countroom and studied the

Shorty settled himself in his chair in that courtroom and studied the three panel paintings above and behind the judgment seat. The center picture was that of a long-legged woman depicting Justice. A sword was in her right hand and she was blindfolded. Scales were upraised and dangled from her left hand. The left panel was and dangled from her left hand. The left panel was and dangled from her left hand. an allegory of Liberty, Equality, and Fraternity, depicted by three husky men in white sheets seated on a marble slab, forming as artistic a reproduction of the steam-room of a Turkish bath as ever was within the power of artist to make. The right panel showed the three Fates, the third woman being a hag—Death.

A black-robed judge twiddled sausage-like fingers

and breathed the stale air of the room with the respiratory violence of a fish freshly taken from the sea. It was the afternoon session of court and he had lunched heavily. His flabby jowls and the collops of

fat on his neck were purpurescent.

The indictment was read, Shorty pleaded not guilty, and twelve men were quickly chosen from the panel

of talesmen.

THE case for the People was presented with skill and speed. The residence of James Hartley, a wealthy broker living on Riverside Drive, had been entered and robbed of silverware between the hours of four and six o'clock on the afternoon of June 20th. Mr. Hartley and his family were away for an automobile spin in the country. In the absence of the family the servants had left the place unguarded for

Two detectives testified to shadowing the house in the East Side where Shorty rented a furnished room. In his absence they had searched the room and had found most of the loot hidden under his bed. His arrest followed. He had a prison record and was generally kept under surveillance.

A stool pigeon of long service to the police testified that he had seen Shorty or a man resembling him enter the furnished-room house at dusk of the afternoon on which the Hartley home was robbed. He carried a dress-suit case and wore rubber-heeled

Cross-examination failed to shake any of the wit-

It was time for the defense to offer its evidence. Gray leaned over and again urged Shorty to change his plea to guilty and to throw himself on the mercy of the court. The judge looked up expectantly. "We will concede that this witness believes that the defendant is upright and honest, and all that," announced the assistant district attorney complacently. Sergeant Mary Meakins turned to the drowsy

"I'D RATHER tell my story, Your Honor," she said, a little quiver in her voice. The afternoon sunshine, pouring through a southern window, laved the little blue figure in silver light.

The judge nodded to Gray to proceed with her direct examination. Sergeant Meakins took firm hold with her little hands upon the slick arms of the chair and faced the lawyer.

arms of the chair and faced the lawyer.

The jurors stirred with a semblance of interest as Mary Meakins cleared her throat and began her effort in behalf of the outcast of society on trial before them. She was his only witness, his only friend. Who but a sidewalk disciple of Christ would have dared take the stand to give a good character to a burglar with two aliases and, two convictions against him?

In answer to questions by Shorty's counsel the witness testified that she was twenty-four years old, that she was raised in a founding asylum, had no parents as far as she knew, had served three years as a private in the Salvation Army and two as a sergeant.

"How long have you known the accused?" Gray asked.

"Since the last time he got out," she replied, to the dismay of the lawyer.

The prosecuting officer laughed

She replied, to the dismay of the lawyer.

The prosecuting officer laughed and the twelve men in the jury box fairly shook with suppressed merriment as they beheld Gray's discomfiture.

"How many years have you known this defendant?" demanded Gray angrily as he touched Shorty on the shoulder.

"Three."

"How did you come to meet him?"

"I was holding a meeting at the corner of Pell Street in Chatham Square," she replied, "when he came out of the crowd and asked me if I would let him go to the barracks for the night. I told him to fall in line and march with us under the flag of salvation."

She paused as if for a guiding question.

"He went with you to the bar-

question.

"He went with you to the barracks?" asked Gray.

"He did, although there were

crooks on every corner of the Bow-ery that knew him and jeered and yelled at him. One of them from the Cherry Hill gang ran out from the curb and spit on him and blas-phemed Joe's only friend, the Lord Jesus"

poke bonnet was bowed for a moment as she fought to regain control of herself, and the shaft of sunshine struck the red ribbon across it and brought out vividly the gilt letters of the word "Salvation."

vividly the gilt letters of the word "Salvation."

A court attendant gave her a glass of water.

"I marched by Joe's side," she went on, "and held his hand, for I was afraid that he would turn on his persecutors. He could have beaten any two of them. We went on up the Bowery to Cooper Union Square, and it got worse. It was Saturday night and there were drunken thieves, pickpockets, and gummen everywhere. They came from First and Second Avenues. Rocks began to fly, and we had to stop when one of them hit Joe in the back of the head and he fell to the ground. My soldiers formed in a circle around me at the horse trough while I washed the cut in Joe's head and wet his face until he got his senses back. The soldiers sang and prayed until I got him on his feet, and then we moved on up Third Avenue to Fourteenth Street. We hurried west to the barracks and got in without anybody else being hurt. Joe had lost a lot of blood, but he knelt with us and repeated the prayers after me. It was the first time repeated the prayers after me. It was the first time he had ever prayed."

The jurors had turned their attention to Shorty, The little blue eyes of the prisoner were shining his profound gratitude for this lone voice that rose in his behalf. There seemed to be less of the expression of the thug in his face than the jurors had expected to find there. A smile of comradeship and love played about his lips. The benignity and compassion that



bit of womanhood in a bright blue dress and cape. An engaging if not pretty face was framed by the old-fashioned, red-banded bonnet of the Salvation Army. She paused for a moment, looked over the courtroom and then walked bravely up the center aisle and through the railing gate to a chair beside the prisoner. A little hand stole out from under the blue army cape and pressed one of the big, rough paws of Joseph Condon, alias "Little Joe," alias "Idaho Shorty."

"The People rest their case," announced the assistant districts attention of the prisoner of the property."

tant district attorney assigned to prosecute.
"Swear Sergeant Mary Meakins," said Gray as he motioned the Salvation Army lassie to the witness

The sergeant's face was pale as she made her way to the chair beside which stood a court attendant with a Bible extended. Her hand trembled as it rested on the book and she stood listening to the oath. "So help me God," she repeated clearly, kissed the Book, and tucked her skirts into the chair.
"We might save time Your Honor" suggested the

"We might save time, Your Honor," suggested the prosecutor, "if counsel for the defense will give me an outline of the nature of this witness's evidence."

"She is a character witness," replied Gray.

"A character witness!" repeated the prosecutor with amused astonishment.

The judge elevated his eyebrows. A character witness for a twice-convicted burglar! The thing was

ed his countenance."

"I knew how much courage and faith in God it required to make Joe stick in the Way of the Cross," resumed Sergeant Mary Meakins, "for I had been through it myself, and the women of the street were cruel to me and laughed at me when I left them to ask the forgiveness of God."

ask the forgiveness of God."

The jurors shifted their attention to her again and found themselves wondering at her gameness.

"But I didn't waver any more than Joe did when I went through the ordeal," Mary added, "and I've been a good woman now for five years. Joe has never faltered and he has been a good man for three years. good man for three years. I know he has, and I would stake my hope of salvation on it. Never for one minute has he forgotten that Christ Jesus is his friend and Saviour."

Her eyes brightened as she extolled the homely virtues of the man she was trying to save from the slow and was trying to save from the slow and hard grinding machinery of the law, and she smiled so winsomely and trustingly to him as she closed her testimony that every man in the courtroom realized that the lassie's heart was beating with love for Joe Condon.

Mary was not cross-examined. Shorty took the stand in his own behalf. He was not nervous and yet he must have been aware that the testimony of the girl he loved counted for nothing as evi-

girl he loved counted for nothing as evidence.

"It's just like Mary—Sergeant Mea-kins—says," he began. "I was bad because I never got a chance. After my first term in Sing Sing I found it hard to get an honest job. After the second term I found it harder. I never had a kind word or a smile from a woman until I see Mary that night in Chatham

Square.

"She was telling what the Saviour had stood just for the sake of such poor bums like me, and I fell for it. She talked about miracles until they got to calling her Miracle Mary on the Bowery. I believed everything she preached. I couldn't help it. There ain't a lie in Mary. When the crooks rocked me I Mary. When the crooks rocked me I stood it because she was holding my hand and talking to me. I could have stood more for her and for the religion, she gave me.

desperate. Men were wanted at Hemp-stead Plains, Long Island, where the aëroplane races were being held. I thought I could get a dollar or two at odd jobs down there, and Mary gave me the car fare. I was there all that after-

the car fare. I was there all that afternoon.

"The flights began about four o'clock. I didn't get anything steady to do, but one of the foremen around the hangars gave me a dollar for helping out with a machine that got stalled. Mary found the foreman after I was arrested to try and get him to help me astablish an alibi, but he could not re
shoulder. "I'll pray 101 you might."

"Only a miracle could get me out now, Mary," he whispered. "Maybe you'll be happy yet."

"God will help me get you out, Joe," she assured him trustfully. "He has never yet failed me."

[TO BE CONCLUDED IN NEXT ISSUE]

came from on high through the religion that had been brought to his soul lighted his countenance.

"I knew how much courage and so the foreman could not be a witness for me. It was somebody else going in my lodging house with the dress-suit case that evening. Before God in heaven it wasn't me. The witness for the police is a stool

"How did the stolen silver get in your room?" asked the judge.

"The crook must have been living in

the same house, and when he found that the bulls were shadowing the place he stowed the stuff in my room and beat it," replied Shorty.

HAS the defense any witness to show that this man was at Hempstead Plains between four and six o'clock on the afternoon of June 20th?" the judge asked.

Gray shook his head.
"Then you are not able to establish an alibi?"
"No, sir."

Shorty's story was ended. "Cross-examination is not necesary,"

suggested the judge.
"The People are content to send the case to the jury without argument," said the prosecutor.

"Do you waive argument?" the court asked Gray, counsel for the defendant, and the lawyer nodded.

The jury was charged briefly and sent from the room.

Mary and Shorty sat close together, hand in hand, during the few moments required for the jury to ballot. The twelve men filed back into the jury box, the foreman holding a slip of paper in

Shorty stood and faced the jury.
"Gentlemen, have you reached a verdict?" asked the clerk.
"We have," replied the foreman.
"What is your verdict?"
"We the jury find the defendant

"We, the jury, find the defendant guilty as charged in the indictment," the foreman replied, handing the slip of paper to the clerk.

Shorty felt a weight against his left arm. Mary had risen and had stood to receive the verdict with him. He turned and saw that her face was very white; and he caught her about the waist as her knees gave way. He held her thus, her head on his shoulder, as the assistant district attorney gave the judge for his consideration the court records showing that the convicted man was a three-time offender and, there-fore, in the eyes of the law a confirmed criminal.

The judge ordered the prisoner remanded to the Tombs until sentence

could be pronounced.
"Hold your faith in God, Joe dear,

sobbed Mary as her arms crept up to his shoulder. "I'll pray for you day and

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The best title will win \$50; the second best, \$25; the third best, \$15; the fourth best, \$10; the fifth, \$5; the sixth, \$5; the seventh, \$5; eighth, \$3; ninth, \$3; tenth, \$3; eleventh, \$3; twelfth, \$3; thirteenth, \$2; fourteenth, \$2; fifteenth, \$2; sixteenth, \$2; seventeenth, \$2; eighteenth, \$2; nineteenth, \$2; twentieth, \$2; twenty-first, \$2; twenty-second, \$2; and twenty-third to forty-seventh,

This contest opens December 16th, and will close January 6th. The contest is open only to subscribers of Farm and Fireside, or members of their families. whose names appear on our subscription lists as paid-in-advance when the

contest closes. The Editor and four other members of the editorial staff will be the judges of the Title Contest. While the contest will close January 6th, it will take the judges until, at least, the middle of January to read all of the titles submitted, decide on the best fortyseven titles, and mail checks to the winners. The awards and the winning titles will be printed in the January 20th issue of Farm and Fireside. Take another look at the picture and send in one title anyway, if not more. Address all your titles to

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A bad penny turns up again, and chance sends a stray kitten to play a fateful part

Hearts and Hazards

Ben Meets an Enemy and Leaves with a Heavy Heart

By EDWIN BAIRD PART VI

HERE'S WHAT HAS ALREADY HAPPENED: Ben Abbott learns that Henkel, a Chicago confidence man, is trying to induce Mr. Sage, Abbott's employer, to invest heavily in a scheme to manufacture gasoline at a penny a gallon. Abbott is in love with Gertrude, Sage's daughter, but Henkel's flattery has turned her head. Sage discovers that Henkel is a crook, and orders him to leave town. As he is leaving the hotel with Blackie, his accomplice, he makes a remark about Gertrude which Ben overhears. Ben knocks him down, the story spreads, and Gertrude, who thinks the act was unprovoked, quarrels with her father and refuses to speak to Ben. He returns to his farm, and then Blackie writes to Gertrude telling her the truth. Ashamed of her infatuation for Henkel and of her conduct to Ben, she delays her apology. delays her apology.

URING the first part of her homeward trip, Gertrude sedulously sketched in her mind an

URING the first part of her homeward trip,
Gertrude sedulously sketched in her mind an outline for the contemplated letter to Ben; but during the latter part her thought was engaged by another matter—namely, his tender attitude toward the unknown girl at the fence. The picture impressed on her mind by these two could not, somehow, be dislodged.

But why should she, who had snubbed Ben Abbott, who had smiled at his awkward ways and lack of subtlety, why should she care how many girls he talked with, or what they talked about? A vexatious question, and no mistake, and it still irked her acutely when at length she reached home.

And then she saw there would be no letter-writing to-day: two girl friends awaited her on the veranda, and these remained till dusk. She told herself she would write to-night. But she was scarcely seated at her desk that night when Charlie Payne "chuffed" up in his new motor, begging her to take a spin with him. This young man repeatedly declared he was crazy about her, and she was far from crazy about him; but he was not disagreeable at any rate, and the moonlit night was glorious, too glorious to stay indoors. She closed up her desk and joined him, saying she would surely write on the morrow.

Varied duties claimed her next morning to the exclusion of other things, and the letter was deferred till afternoon, and then put off again till night. And again it was delayed, and again and again, each act of procrastination being easier than the one preceding, until finally it joined the millions of letters that never are written.

The weeks lengthened to another month, and September passed and Indian summer came, and the last prickling of Gertrude's conscience vanished. She forgot Ben Abbott.

Less easily fared Ben. The farm routine, as rigorous now as ever, demanded almost every waking moment; but there still came times when his thought turned pensively backward, and he mused dismally, to no profitable end, over what might have been.

It was a lowering day in December, with a touch of snow in

agricultural journals in order to keep abreast of the latest thought on his work, and on this particular day he was clipping and filing some items of value when his mother called him to

the telephone. Gustave Ortmann, who owned the adjoining farm, spoke to him on the wire:

him on the wire:

"A slippery-looking customer just left my house, Ben, and he's headed your way. I thought I'd warn you against him. He's trying to sell stock in a so-called farmers' co-operative produce - distributing company, and if he's not a shyster I miss my guess."

"Thanks," said Ben. "I'll keep an eye out for him."

Then he went to the front door and looked toward the road. A horse and buggy had already stopped before the gate, and a pallid-faced, light-haired man alighted and came toward the house. When he

toward the house. When he was twenty feet away, Ben saw he was Henkel, and almost simultaneously Henkel recognized Ben.

He stopped on the walk, nonplused for a moment, but he

quickly recovered his wits:

"I suppose," he said with a sardonic smile, "there's no use

"I think not," said Ben, and added curiously: "How does it come you're not in jail? I read—"

"Don't believe everything you read, my boy. It's very unwise. The small annoyance to which you allude was over in a week, and, as you see, I am now happy and prosperous." "I see," said Ben, laying his hand on the door knob. "Well, you needn't waste your time any further here," and he opened the door. But Henkel's next words caused him to close it ab-

ruptly:

"I suppose you're still on friendly terms with Miss Sage of Peoria?"

Ben stepped to the edge of the porch and narrowed his eyes at the smaller man below.

"I think," he said quietly, "you'd better be moving."

ing."

"Oh, don't get huffy," laughed Henkel, turning to leave nevertheless. "I was only wondering if you had heard about her engagement. She's to be married next month." Then, whistling unconcernedly, he sauntered back to his buggy and drove away.

For a matter of three minutes Ben stood as Henkel had left him, staring stonily into the darkening day,

had left him, staring stonily into the darkening day, and when at last he went inside he seemed to have and when at last he went inside he seemed to have aged three years. As a man in a trance he climbed heavily to his room and made shift to resume his clipping. But he soon abandoned the work and, dazed, sat listlessly gazing at nothing, scissors in one hand, a mangled farm journal in the other, and both forgotten. He realized now he had never quite given her up; that always, in the back of his head, there had lingered the hope that some day all might be explained, and that she, learning how she had wronged him, would afford him a chance of winning her. And now the last vestige of hope was gone. No use longing for her now. She belonged to another. . . .

MRS. ABBOTT, who had been feeding the chickens during Henkel's brief visit, came up-stairs to his room, but her approach, though audible, failed to arouse him from his stupor.

"Ben," she said, pausing on the threshold, "it's getting dark. Hadn't you better feed the stock?" And then he looked up and she saw his face, and her whole expression changed. "Why, Ben!" she exclaimed, going hurriedly toward him. "What's happened? You look as pale as a ghost!"

He rose woodenly, taking care to keep his face averted, and began putting his periodicals away.

"I was only thinking," he said in a voice that sounded unfamiliar to his ears.

"Thinking of what, Ben?"

"Something—unpleasant, Mother."

Her efforts to get a more specific answer proved unavailing, and perplexed and worried she followed him down-stairs, resolving to cook "something extra nice" for supper by way of cheering him up.

The snow, which had been threatening all day, had begun to fall in earnest when Ben emerged to the outer air, and this accentuated his depression. More than ever apathetic, he fed and watered the stock in a mechanical fashion, and it was not until he had finished this duty that he remembered something which had been driven entirely from mind by Henkel's crushing speech: George Marshall, who lived in the adjacent county, had asked him over the telephone that day to visit a sick colt whose malady nobody had been able to diagnose. There was nothing uncommon in this request, for Ben's knowledge of

animals and his skill in curing them were known throughout the countryside. Equally well known was his willingness to oblige in any such emergency, and his first thought on remembering Marshall's summons was to start at once to the colt's aid.

He decided he would have time for the trip before supper was ready, and so, without returning to the house, he saddled a horse and rode smartly westward toward the woodlot, showing stark and black through the falling snow.

the falling snow.

He had galloped as far as the creek, which was the county dividing line, and was charging across the bridge when the plaintive me-ow-w of a kitten arrested his flight. Turning, he rode slowly back, unable at first to determine whence came the sound. He noticed that a thin coating of ice had formed on the water, and wondered if the animal had wandered upon this. Then the cry was repeated, louder than before, and he discovered it came from the branch of a tree overhanging the creek.

"Treed by dogs," was his thought, and it was characteristic of him that even in this moment of mental turmoil and the need for haste he dismounted and went to the animal's rescue.

The tree was a young maple with low-hanging

The tree was a young maple with low-hanging limbs, and he had no difficulty in reaching the kitten. Plucking it from the bark by its scruff he tucked it into his coat pocket and started to descend.

Perhaps the thought of the time he had lost made him everyheaty and corpless or it may have here.

Perhaps the thought of the time he had lost made him overhasty and careless, or it may have been because he had fallen into another fit of abstraction, and was therefore half-oblivious to his position. In any event, a dead limb to which he trusted his weight snapped like a match, and in the next second Ben was in the icy water below.

The water was scarcely waist-deep, but a sharp pain, biting like fire, told him he had wrenched his ankle severely, perhaps broken it. In excruciating agony, several times submerged in water, he dragged himself to the bank, and there fell prone, breathing heavily.

After a bit he tried to rise, but could not, and, sinking back to the ground, he propped himself on an elbow and lifted his voice in a call for help. It was a full half-mile, however, to the nearest house, and his hope of being heard was slim indeed. He stopped calling, and opened his knife and cut away his shoe and examined his injury. His ankle was broken.

HE BEGAN calling to his horse, who had sought shelter from the storm near the trees on the opposite bank, and finally coaxed her near enough to grasp the left stirrup. Laboriously he dragged himself to a sitting posture and reached for the saddle, and then, just as his hope of success seemed bright, the horse took fright at this strange procedure and, emitting a sharp whinny, galloped full-tilt toward home

Ben crumpled to earth, his jaws locked, his face white to the lips from pain. The snow was growing heavier. The flying hoof beats died away to the east.

Ben's failure to respond to the first call for supper occasioned his mother no anxiety, since he was often tardy for meals when engrossed in the work outdoors; but when a second and

third summons brought no reply she began to feel alarmed. She was still worrying about his strange mien a while ago, and this contributed to her ap-

prehension.
Calling Nestor, dozing beside the kitchen stove, she threw a shawl over her head and hurried out to the stable and hurried out to the stable. calling her son's name as she went. His absence caused her fright to mount apace, and this fright became a panic when the mare, which he had ridden, galloped in, riderless.

galloped in, riderless.

All manner of frightful fancies assailed her now, and she completely lost her head. Without returning to the house for Steve, the only hand who was retained on the farm during the winter months, she ran wildly in the direction from which the horse had come, stumbling, almost falling, in the deepening snow, screaming Ben's name at the top of her voice, her mind harrowed with agonizing pictures. The dog raced on ahead of her, muzzle to the ground, plowing through to the ground, plowing through

In her sudden terror she had forgotten to light a lantern, but she would not turn back now. She pushed distractedly

on, following Nestor, trusting to him to choose the right way.

That this trust was well placed became manifest when, after what seemed an interminable [CONTINUED ON PAGE 21]

E.W.*



The message was attached to the dog's collar

The Blue Envelope

[CONTINUED FROM PAGE 3]

He went perfectly wild—never, never have I seen him so black angry:

"If you're joking," he said, "it is a very poor joke. You cannot seriously consider engaging yourself to a dissipated, worthless waster like Randall Heeth, to say nothing of the fact that his family is not only common but notorious."

his family is not only common but notorious."

"You'd better be careful what you say, Uncle Bob," I said. "You don't think I'd let you and Mrs. Alex pick me out a—a husband, do you? Why, you'd pick out a—a minister—or a funny little prize boy like Wilbur Allen, or—or something like that. You seem to forget that I'm all grown up now and have tastes and preferences of my own. Come, do be nice. Ranny's a dear when you know him." I went over and tucked my arm into his and rubbed my cheek against his shoulder. "Can't I blandish you into being nice?" I asked.

HE DREW away from me—it was evident that he wasn't going to be blandished. He walked up and down a bit and then sat down at his desk, evidently considering the thing carefully. Then he began to speak, talking in a sort of red-hot, ice-cold tone, like a burning icide.

sort of red-hot, ice-cold tone, like a burning icicle.

"If you marry Randall Heeth," he said, "you will not receive the bulk of your father's estate until you are twenty-five years old. In the meantime I have the power which I shall use, to cut down your allowance so that you will be able to afford necessities—but no more. I want you to tell young Heeth this and see what he says."

Oh, I was angry.

"Do you really mean, Uncle Bob," I asked, "that you would cut my allowance down to almost nothing for seven years?"

ance down to almost nothing for seven years?"

"I mean exactly that."

"And why," I went on, "do you want me to tell Ranny? Do you think it will make any difference to him?"

"I think," he said, "that it will make a very great difference to him. I happen to know that he needs money very badly just now, so badly that he evidently is willing to marry to get it."

"It's not true!" I said. "I never heard anything so—so infamous in my life. It's not true."

"Leslie," said Uncle Bob very sternly, "have I ever told you a lie?"

"Not till now," I said as hatefully as I could, "but I know that what you are saying about Ranny isn't true. Everyone says horrid things about him just because he's been a little wild. I tell you I like him a million times better than any milk-and-water theological student that you think would make such a model husband for me. I like a man with some spirit."

"You don't know what you're talking about," said Uncle Bob. "But—well, Leslie, I stand by my word. If you can't live on the allowance I propose to give you, you had better get married at once and let your spirited husband support you."

I got up and dropped him a deep curtsy.

"Thank you for the advice," I said.

I got up and dropped him a deep curtsy.

"Thank you for the advice," I said.

"I shall take it." I picked up my gloves and bag and made a perfectly magnificent exit, at least it would have been if I hadn't banged the door and run as hard as I could go through the outer office into the hall to the elevator. I didn't even say good-by to Miss Winch. I just flung myself into the elevator and the instant it reached the first floor I jumped out of it and through the re-I jumped out of it and through the re-volving door and across the pavement

nd into Ranny's little racer before he knew I was coming.

Naturally he looked round in some surprise. "What ho!" he said. "Why the mad haste?"
"Let's get out into the country and I'll tell you," I answered.
The car pulled slowly away from the curb and then, with the siren shrieking, Ranny let her out as he loves to do, and Ranny let her out as he loves to do, and

Ranny let her out as he loves to do, and we flew down the street, just missing the people on foot and the other cars, and passing everything going our way. I pulled my tight little hat still tighter on my head and clasped my silver fox up around my throat and then I braced myself and just gave myself up to the pleasure of feeling the speedwind against me. It was glorious, and yet I couldn't enjoy it, for I was too hurt and mad with Uncle Bob. As soon as we got out into the country I screamed into Ranny's ear:

"Slow up a little, Ranny dear. I

"Slow up a little, Ranny dear. I shall fly to pieces if I don't tell you all about it this minute."

Ranny slowed and we ran lazily along the winding, dipping, sunny country

"You'd never believe what Uncle Bob said," I began. "I'll never forgive him, Ranny, never. He was so unreasonable—and so arbitrary, and so mean."

"I'm going to stop a minute and light another cig," said Ranny. "Well, what did the old gink say?"

"He said," I told him, "that if I married you he'd hold back my money until I was twenty-five and only give me the least little bit of an allowance, just enough barely to live on." Ranny's match stopped halfway to the waiting cigarette. He looked around at me dazedly.

dazedly.

"Wha-what?" he stammered.

"Isn't that barbarous?" I said, for I "Isn't that barbarous?" I said, for I thought he was just astonished. "I never knew Uncle Bob to speak so about anything before, and I've had scoldings enough for one thing and another before this, goodness knows. He was just—hateful. He advised me, in the most sneering way, to get married and let my husband support me if I didn't like the idea of a reduced allowance. And, Ranny, that made me so enraged that I just dropped him a deep curtsy and said, 'So I shall,' and slammed the door. I didn't mean to slam the door, but when I took hold of it I felt so slammy that it went bang before I could stop it."

Ranny didn't laugh as he usually did at my nonsense, and yet he didn't seem at all responsively indignant. He was—

at my nonsense, and yet he didn't seem at all responsively indignant. He was—queer. Somehow the way he looked made me feel queer too. So I went on talking, very fast.

"Of course, I know," I said, "that my not having the money makes no difference to you."

Ranny was still fumbling with his match box and he didn't look at me. Suddenly I had a feeling that someone—something, had laid a cold finger on my heart. I had to ask him. I said

Ranny seemed to come out of profound meditation. He did not look at me even now, but took hold of the steering wheel and started the car going

ing wheel and started the car going slowly.

"Why, no—no, of course it doesn't," he said, at last, "and I don't believe old Parsons is on the level. What you want to do is to get a good smart young lawyer and find out just exactly what's what. You might be able to make him give up right away."

"Oh-h!" I gasped, "I couldn't do that, Ranny. Uncle Bob was father's dearest friend, and he wouldn't tell me a lie to save his life. If he says I can't have my money—it's true. What—what difference does it make, anyway?"

(But how my cheeks burnt when I asked that!)

asked that!)
Ranny looked awfully sullen—and impatient.
"Well, hang it," he burst out, "we've got to live, haven't we? I suppose the old man will always put up for me as long as I stay at home—I can always get round Mother anyway—but I don't know what he'd say if I wanted to get married."

FELT as if the whole world had sud-I denly fallen to pieces. But I couldn't think that he meant it just as he said it—I couldn't. A man who lives on his wife's money, here in America at least, is the very lowest thing that breathes. My heart seemed pounding a hole in my side, and at last I heard myself saying,

side, and at last I heard myself saying, just as if I was listening to a stranger:
"Do you mean that your father supports you, but wouldn't support me?"
"Why," said Ranny, "I supposed, you know—that you'd have plenty—and—"
"But Ranny," I broke in, "you—you might work. It wouldn't take—it wouldn't take very much for us to live on, if we live simply. I'd not be wasteful—truly"

I put my hand on his arm. I was pleading with him to spare me what I knew inside of me I'd got to face. I felt that I couldn't bear it-I couldn't

"Oh, yes," Ranny answered me in such a sneering, taunting voice, "I know all about that sort of thing. We'd live in some hole of a tenement, doubtless, and you'd do the cooking and I'd go to work every morning with a tin dinner pail, I suppose. That's a fine idea, that is."

He turned and looked at me now, and for the first time I saw him exactly as he was, selfish and cruel and common, and suddenly I knew, too, that I had never been in love with him and couldn't

possibly be. It shook me to my soul.
"Stop the car," I said.
He did it, looking at me stupidly.
"What's the matter?" he asked,

blankly

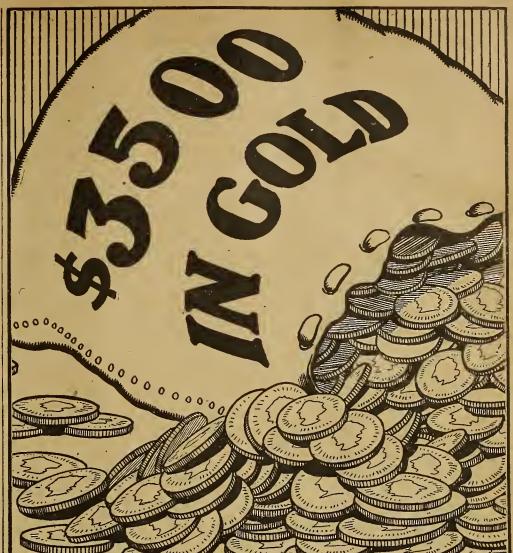
blankly.

I didn't answer until I stood on the ground. Then I took a deep breath and gripped my hands together.

"I just want to tell you," I said, "that I utterly detest and despise you, Randall Heeth. I wouldn't marry you if you were the last man on earth, and the only one. I'll walk back to town rather than ride with you, and I don't want you ever to speak to me again as long as you live."

[CONTINUED IN NEXT ISSUE]

[CONTINUED IN NEXT ISSUE]



For Wide-Awake People

How wide-awake are you? Surely, you're smart enough to win one of the four hundred prizes we are going to award.

Prosperity is sweeping the country. It has struck us. And we have set aside \$3,500 as prize money for a little contest we are going to conduct among the readers of FARM AND FIRESIDE.

It's a simple, interesting game—to be played in your leisure time. Chock full of fun-and an opportunity to win a big prize. Lack of space prevents our describing the game here. So we've arranged to send full particulars to all who mail the coupon below.

Understand, sending the coupon does not obligate you in any way. It simply brings you the particulars of the game. If you are even the least bit clever you can be the winner of one of the golden prizes.

The Things You Have Always Wanted Are Now Within Your Reach

That motor car—that victrola that tractor—yes, all the hundred and one things you have always been hoping to get, but never felt you could afford, can now be yours.

One thousand dollars in gold (that's the first prize)—think of all the wonderful things you could buy, think of how happy it would make you, your wife, your family! And it is now within your very grasp. Reach out for it. Merely send the coupon below and find out how easily this money can be won.

And even if you shouldn't win the first prize, you may get the second or the third, or any one of the four hundred prizes. It is the simplest, most enjoyable game we know of. Its rewards are well worth while.

AWARD LIST

400 Prizes Totaling \$3,500

For the best set of title suggestions For the next or second best set For the third best set For the fifth best set 100 For the sixth best set, \$75; the seventh best set, \$50; the eighth best set, \$50; the ninth best set, \$25; the tenth best set, \$25; the eleventh to fiftieth best sets, \$10 each; the fifty-first to one hundred fiftieth best sets, \$5 each; the one hundred fifty-first to three hundredth best sets, \$2 each; the three hundred and first to four hundredth best sets, \$1 each.

Thousands of people, of course, will answer this advertisement; thousands will want to try their skill in the game, so we urge you to send your coupon at once for full particulars.

Total, Four Hundred Awards

The quicker you get started the better, so The quicker you get started the better, so send your coupon to-day. Remember, it does not cost you a single penny. There is nothing to buy when you send this coupon. It is merely a request for information. But do not delay—to-morrow it may have slipped your mind. Opportunities like this do not often present themselves. Grasp this while it is within your reach by sending your coupon before you do another thing.

Win This Thousand Dollars

First Get Full Information

By Mailing this Coupon To-Day

CLIP ON THIS LINE

F. F. 70-12-16 F. F.



Children's Corner

Clorinda Clove and the Candy Cabin

By Rose D. Neally

NCE upon a time there was a little girl who was very fond of candy. She lived in a fine house and had every-thing a little girl could ask for, except that she never had all the candy she wanted to eat.

wanted to eat.

One day this little girl, whose name was Clorinda Clove, was wandering alone in her father's garden when she met a very old woman who was hobbling along with the aid of a stick.

"What is the matter, little girl?" she inquired. "Why do you look so sad?"

"Because I cannot have all the candy I want to eat," replied Clorinda Clove.

So Clorinda Clove put her hand in the hand of the little old woman, and together they wandered out into the beautiful forest.

tiful forest.

When they had gone so far that Clorinda Clove was beginning to get tired, the little old woman stopped hobbling, and said to Clorinda Clove, "See, here is our candy cabin!"

Clorinda Clove looked up and saw a very fine cabin all made of candy. The walls were made of great logs of striped peppermint candy. The chimney was built of enormous bricks of solid caramels. The window casings were made of bars of sweet chocolate, and the doorsteps were enormous slabs of hard, clear rock candy.

Clorinda Clove clapped her hands and cried, "What a beautiful cabin it is!"
"Come," said the old woman, "let us go in the."

So they went inside. The floor was laid with squares of fudge—first a square of chocolate fudge and next a

square of divinity fudge.

The walls were decorated with chocolate drops and marshmallows, lime drops and ginger drops, and wafers, all

flavors. "Well, how do you like it?" asked the

little old woman. "Oh, I think it is grand!" said Clo-

rinda Clove.

"Come now, we must get to work," said the old witch. "Hang your hat on the peppermint peg and help me to get

"But I don't know how to work," said

Clorinda Clove.
"Well," said the old woman, "you can't expect to get anything to eat here unless you work for it. Now, there is unless you work for it. Now, there is the candy bucket in the corner. Take it to the ice-cream spring and get a bucket of ice cream."

Clorinda Clove, who had looked rather glum when the old woman mentioned work, brightened up again.

"Oh, I'd love to get ice cream!" she answered. "Where is the ice-cream spring?"

answered. "Where is the ice-cream spring?"
So the old woman showed Clorinda

Clove where the ice-cream spring was, and Clorinda Clove ran and filled the bucket with delicious ice cream which was bubbling up out of the ground un-

was bubbling up out of the ground under a spreading pecan tree.

But she found the bucket was very heavy, and was glad when she got back to the cabin with it.

"Now," commanded the old witch, "your legs are young and nimble, so you must climb the lemon-pie tree and pick a couple of lemon pies for our dinner."

"I'm very fond of lemon pie," said Clorinda Clove. "Show me the lemonpie tree."

So the old woman hobbled along and pointed out a tall tree where the most

pointed out a tall tree where the most beautiful lemon pies were growing. They were shining yellow in the sunlight, and each pie was piled with a lovely meringue at least three inches deep

Clorinda Clove found the lemon-pie tree was too tall to climb, so she reached up and tried to shake one of the branches. A lemon pie came tumbling down and landed in a horrid jumble at

her feet.
The little old woman came shrieking and hobbling out of the candy cabin and scolded Clorinda Clove very fiercely.

"But the tree is too tall to climb, so how was I to get a lemon pie without shaking it down?" argued Clorinda

"Get the stepladder!" commanded the

old woman.

was all Clorinda Clove could do to drag it along. The old woman did not offer to help her, but hobbled after her, and waited while the little girl climbed the ladder and handed down the lemon pies.

"Now," said the old woman, "we'll eat our dinner. Sit down, child, and eat."

She placed the things on a table made of solid molasses candy.

of solid molasses candy.

But Clorinda Clove was so tired she could scarcely eat. There was nothing on the table but candy and lemon pies.

"I want some bread," said Clorinda

"Bread!" screamed the old woman.

"What do you want with bread?"
Clorinda was so frightened that she ate her candy and lemon pie without another word. So much sweet stuff made her feel sick and there wasn't a thing to drink on the table, but she did not dare

drink on the table, but she did not dare ask for anything.

At last she ventured to say in a very timid voice, "Oh, please, Mrs. Witch, mayn't I have a mug of milk to drink with my candy?"

The old woman looked at her sharply. "Milk!" she repeated. "What sort of thing is milk? Drink your ice cream." "You can't drink ice cream," cried Clorinda Clove.

the back and said: "My son, those crooked furrows are the best that you have turned to-day!"

The father knew how easy it had The father knew how easy it had been to plow the straight furrows of the morning and how much perseverance it had taken to plow even a crooked furrow when the day's labor had nearly ended. Life is full of crooked furrows that would look anything but crooked to us if we only knew the labor and effort that had been expended upon them. Someone has said that God pays for work not success work, not success.

Here are two men working at the same task. One is strong, vigorous, resourceful. When the night comes he is almost as unwearied as he was in the freshness of the morning. Work is almost like play for him. The other man, with weak limbs and failing strength, drags himself wearily to his task in the morning, and still more wearily homeword when the tasks are done and the ward when the tasks are done and the day has ebbed away, for his family must live and he has no resources save his daily wage. He cannot accomplish as much as his stronger brother; but, after all, when the day's record is made up in heaven, will not his record shine more brightly and the furrows he has



Bringing in the tree

And—would you believe it?—from that day to this Clorinda Clove has never cared much for candy.

Crooked Furrows

By G. W. Tuttle

SOMEWHERE I have read of an ambitious youth who followed the plow all day in his father's field. During the early part of the day he often looked back with pride and pleasure upon the straight, brown furrows that he had turned so evenly; but as the afternoon passed he became weary, and as night approached, the furrows, in spite of his

best efforts, grew crooked.

When his father greeted him upon his return at night, the first thing that the youth spoke of was the crooked furrows, but his father, noting the discour-

"What else is it for?" demanded the plowed seem straighter to the eyes of

"What else is it for?" demanded the old woman.

"Why to eat, of course."

"To eat!" chuckled the witch. "Look!"
Sure enough it had all melted.
It was growing quite warm in the cabin. Clorinda Clove noticed that the candy was dripping from the ceiling and that the floor felt soft. She tried to rise from her chair, but she was glued fast.

With a frantic shriek Clorinda Clove cleared herself from her sticky chair and leaped right into the arms of her father.

"Why, Clorinda," he cried, "you fell asleep with your head right in the hot sun!"

And—would you believe it?—from that day to this Clorinda Clove has that day to this Clorinda Clove has the cold woman.

"Here are two women. One is strong and capable, a notable housekeeper, a skilled cook, an excellent seamstress. The day has scarcely hours enough for her energy, and her light prevails over the nighttime. The other woman labors under a severe handicap of ill health. What would be but a molehill in her stronger sister's path seems a mountain in hers. She goes slowly and painfully about her daily tasks. Some things must be left undone because she has no energy left for the less important tasks.

Which of these women, think you, are entitled to the greater praise? Which, when we weigh the handicaps, is turning the straighter to the eyes of the angels?

Here are two women. One is strong and capable, a notable housekeeper, a skilled cook, an excellent seamstress.

The day has scarcely hours enough for her energy, and her light prevails over the nighttime. The other woman labors under a severe handicap of ill health.

What would be but a molehill in her stronger sister's path seems a mountain in hers. She goes slowly and painfully about her daily tasks. Some things must be left undone because she has no energy left for the less important tasks.

Which of these women, think you, are entitled to the greater praise? Which, when we weigh the handicaps, is turning the straighter to the extent of the angels?

heroes and heroines all along the pathway of life. What greater heroism is there than that of the man or woman who is not discouraged by adversity, who never whines at ill health, who fills his or place, doing their part of life's work up to the york left limit of life's work up to the very last limit of strength that God gives them!

Ah, we love the men and women who do not say, "Give me an easy task; I am but a weakling," but, instead, strive to carry their burdens and do their part in life's work. Let us love them now, making allowance for any crooked fur-rows that they may turn. If the pressure is so heavy sometimes that they seem irritable, let us put ourselves in their places, we who are strong helping to bear the infirmities of the weak, for in the end their work may shine with greater beauty than our own, and their most of approval be greater than our The stepladder was very heavy, and it aged tone of his voice, patted him on meed of approval be greater than ours.

Good Health Talks

By DR. DAVID E. SPAHR



PERHAPS one half of the patients who consult this department through FARM AND FIRESIDE complain of indigestion or dyspepsia. The diseases of the gastrointestinal tract, of which indigestion or dyspensia is a or dyspepsia is a prominent symp-

fifty. The diseases of the stomach alone are twelve, and those classed as dyspepsia include six of those. Diseased organs remote from the stomach, such as the brain, genito-urinary organs, and the bowels, may through reflex action create serious disturbance in the stomach. Hence it is necessary to know more about the trouble before prescrib-

Remedies for indigestion depend altogether on whether the trouble is caused by acute or chronic gastritis, a gastric or peptic ulcer of the stomach, or obstruction of the outlet to the stomach, cancer, appendicitis, an infected gall bladder, or forty other possible causes.

In order to determine definitely what you should take, would require a careful physical, chemical, and microscopic examination of the patient and the contents of the stomach after a number of test meals.

Chronic Rheumatism ·

Have rheumatism in my hand and enlargement of joints, and have great difficulty in closing my hands. Also have a weak stomach. Am taking iodide of potassium—15 to 50 drops after meals. Is this hard on a weak stomach? What are thereid moved my? are thyroid powders?
Mrs. E. C. M., New York.

If THE saturated solution of iodide does not agree with your stomach you might try the following: Pot. iodide, four drams; syrup trifolium comp., four ounces. Teaspoonful after meals. Thyroid powders are the extract of the thyroid gland of the sheep.

Injured Knee

On December 10th I injured or sprained my knee, tearing loose the ligaments and let out a lot of fluid about the kneecap. At first I could hardly walk, but can do better now. The kneecap seems to float around in fluid, but the doctor here cannot get the fluid out. He has tried to absorb it, but cannot, and is afraid to cut and let it out. Says it would be hard to heal up. If this fluid were out I would be all right, I am sure.

W. L., Wisconsin.

YOU have acute synovitis of the knee joint, with distention by fluid. You should be put to bed. The fluid should be aspirated out with a fine needle, under careful antisepsis, with precautions of the most rigid kind and great care in guarding against the admission of air. After the excess of fluid has been withdrawn, a fair degree of compression can be made by enveloping the limb in borated cotton and a roller bandage applied. Passive motion may be omitted for perhaps six weeks. This may prevent pus formation.

Debility

I have a soreness in my back below the waistline. Also headache, and am very nervous. I have a child ten months old. Mrs. C. D. R., Indiana.

PERHAPS you have become debilitated nursing your baby and doing your work. Take as much rest as you can, and eat good nourishing food. Take ten grains of sodium bromide in a teaspoonful of syrup of pepsin before

This may relieve your headache, backache, and nervousness.

Mrs. F. I. S. of Ohio has been having laryngitis and has not been able to speak above a whisper for six weeks. Has done everything that she knew to do, even to blistering the neck, with no results.

APHONIA is not an uncommon result of acute laryngitis in cases with weak throats and nervous condition. There is not much more you can do unless you try cold applications, and taking about three grains of borax and allowing it-to dissolve on the tongue every three or four hours. You will soon recover your voice unless there is soon recover your voice, unless there is some structural disease of the vocal

Hearts and Hazards

[CONTINUED FROM PAGE 18]

space of time, the maple trees loomed ahead through the snow-swept night. With a deep-toned bark of delight the Newfoundland leaped in that direction, and a moment later there came an an-

Mrs. Abbott pressed on, trying to call to him, but her voice had grown hoarse from continual screaming and was now

little more than a whisper.

She found him on his hands and knees, he having essayed to crawl home. The pain caused by this exertion was anguishing, but his first thought was

for her.

"Mother, why didn't you send Steve?
You shouldn't have come out in this blizzard. You might catch your death of cold."

She naid no head to his words. Knowledge of the standard of

She paid no heed to his words. Kneeling beside him in the snow she put her arm about him, and instantly a gasp escaped her:

"Ben, you're soaking wet! What on earth's happened? And your teeth are chattering too. It's a wonder you're not frozen. What—"

"Fell in the creek," he gritted between clenched teeth. "Climbed tree. Went asleep, I guess." Unable to continue without revealing the agony that racked him, he pointed mutely to his ankle, now swollen to twice its normal

Choking back the sob in her throat she tore off her apron and used it for a bandage. Presently they tried to proceed, he with his hand on her shoulder. But their progress in this fashion was slow and doubtful, for if he so much as the should the ground with his pright foot touched the ground with his right foot he received a jolt of pain that jarred his whole body, and he was forced to stop before they had gone far. He had the sickening fear that he was going to

swoon.

"No use, Mother,"—he tried to smile as he slumped back into the snow, shaking his head. "You will have to get

Steve."
"But, oh, Ben, I can't leave you here!
I can't!"

He started to speak, found he couldn't manage his voice, and handed her a pencil and a bit of paper. He then put his arm around Nestor, who had not left his side since the moment of discovery, and uttered a single word: "Quicker."

Wulcker."
She nodded understandingly and wrote as best she could: "Ben hurt. Bring buggy, blankets." The message was attached to the dog's collar by means of a strip torn from her skirt, and Ben spoke a sharp command: "Home! Get Steve!"

[CONCLUDED IN NEXT ISSUE]

TO KEEP HAMS AFTER SMOKING-First fill a large kettle or boiler full of water and let it come to a boil. Then dip your hams in and let them remain three minutes. Remove to a board or table, and cover them with a thick paste made of flour, water, and cayenne nenner: have the paste red with the paste made of flour, water, and cayenne pepper; have the paste red with the pepper. Let them lie in the sun until dry; then put in paper sacks and tie closely. Hang in a dark place. Tying them up in flour sacks will secure them against flies, etc. A. B. W., Illinois.

New Puzzles

New Year's Resolutions

Can you translate into plain English these ten up-to-date precepts for the New Year?

Fi ta strif ouy tond cedecus ryt mose herto yaw.

Therein worrob ron neld whittou doog

yescurit.

Eb mirf hiwt ryou semine dan rilyfa os tiwh uroy endsfri. Tond kate cesnach nad laiw ta tusrels.

Tamid oury rorres ta salte ot sourlefy. Lecanco oury broutsel dan letl oury

yojs. Nodt od vorsaf nad keat meth tou ni sitingraved.

Gifth fof lesf-yipt sa ouy louwd finyitrim.

Alynaze katismes ot volse uretuf

lempsrob. Nodt vige trubal ropof fo rouy

sankfrens.

Answers to Puzzles

Puzzles Printed Last Issue

Measuring Oil

The oil merchant must have drawn 30 quarts with the three-quart measure, 6 quarts with the two-quart measure, the remainder of the barrel, 90 quarts, with the five-quart measure.

Letters From a June Bride

Betty Plans Christmas Gifts



EAREST SISTER: When Father's letter first came, urging us to come home for Christmas, I was so carried away with the thought sitting down

again to a groaning table along with all the numerous other members of the family connection, that I began at once to make plans for carrying out this en-chanting dream. I went so far, even, chanting dream. I went so far, even, as to get out paper and pencil and put down a lot of bewildering figures so that I might get some idea of what it would mean to us in actual cash expenditure. Of course we could never estimate what it would mean to us in other ways. other ways.

However, it was not until I had tumbled out the contents of our little savings bank that I woke up to the disheartening realization that this dream, like most other dreams worth dreaming, was all "too good to be true." Though I counted our fortune over and over again, I couldn't stretch its proportions to satisfy even my most conservative calculations.

tions to satisfy even my most conservative calculations.

"Giving up the trip is bad enough," I told Billy gloomily, "but there isn't money enough to buy even the simplest presents for so many people."

"Never mind," Billy said consolingly.

"We'll find a way out of it somehow if we just put our heads together and think."

So we did "put our heads together," and as a result have ready not only beautiful table decorations but most wonderful gifts for everybody, and all with practically no expense, unless we count our own labor, which we should not do when it has given us so much pleasure.

Knowing that you are planning to et home in time to help Mother with all the necessary preparations, we are all the necessary preparations, we are sending our boxes to you, so that you can see that everything is done as we have planned. I have put all the table decorations in the big box. The varnished pine cones are to be set at each place, and one of the tiny red candles put in each of the holes which we cut in the top to make them look like real candlesticks.

You will also find a pile of varnished oak leaves, which we picked when they were at their loveliest and then pressed

were at their loveliest and then pressed in the big dictionary until we were ready to varnish them. You have no idea how lovely they look spread out on a white cloth. It was our idea to have them sprinkled about the table in no regular order, just as if they had fallen from the trees and alighted there.

But the most enchanting thing is little May's Christmas tree, which we want you to arrange as a centerpiece under the hanging dome. If that is lighted I think no candles on the tree will be necessary. We grubbed up several little cedars before we found just the right one, which was small enough to go by mail and yet symmetrical in shape. I have taken the greatest pleasure in finding trimmings for it. A tencent bottle of silver and gold paint was more than enough to dress up the haby cent bottle of sliver and gold paint was more than enough to dress up the baby pine cones which we had been saving for that purpose. Then I strung the red berries from the spice tree onto a long chain, and this gives a lovely touch when wound in and out of the branches. The yellow sand-brier berries hanging by tinsel threads look like little gold balls, and to finish the fairy effect I have gathered wilkweed pods whose feathery seeds when sprinkled over the tree look just like the softest snow. Billy said it was the most artistic tree he had ever seen, and I am sure it will delight the grown-ups as well as Pohy Mey well as Baby May.

IN ANOTHER box I am sending the Christmas game which we have worked out as entertainment for the guests while at the dinner table. When it arrives it will not be necessary to open it, except to take off the outside wrapping. You will see it is made to represent an express box with a "Handle with Care" sign and a valuation of \$50,000, which is conservative enough when you know all that it contains. Now, this is how you can help us with the plan:

When the dessert is being brought in, arrange to have someone ring the front

arrange to have someone ring the front door bell, and when Mother sends Nellie to answer it, have her return and bring



the box to your place at the ta-ble. When everyone has tried to decide what it can contain, cut the strings and open it. Inside are envelopes ad-

one of the guests, and inside each envelope is a correspondence card on one side of which is a picture cut from the advertisement section of old papers and magazines, and on the other side of which is a little verse to explain the picture. As you hand out the envelopes to each one in turn, read the following verses. The poetry is not all that it might be as to rhyme and meter, but it answers its nurnose at any rate. answers its purpose at any rate.

Last night we had a wondrous dream—
Oh, would that dreams came true!
Then on this merry Christmas Day
We'd give these gifts to you.

This letter came from Hetty Green: "Go buy whate'er you will.
Get all your Christmas presents now
And just send me the bill."

We've done just what she told us to.
How happy was the task!
The choice we've made for each of you
We hope is what you'd ask.

At this point hand out the envelopes one at a time.

Bungalow for Mother and Father

We hope you'll like this bungalow; We had it built for two. Please do come down and live in it While it is nice and new.

GUN FOR BUSTER

Here's a gun for Buster, Just aim it where you will, For even Mother can't object— It's warranted not to kill.

AËROPLANE FOR BROTHER TOM

You are lucky to have an auto, And we know that you give it care; But here is something useful If you ever "go up in the air!"

GOWNS AND HATS FOR AUNT HETTY

Put these right on and wear them,
For styles don't stay in long;
And don't be afraid, the bill is paid,
Please report if there's anything wrong.

SEVEN-PASSENGER CAR FOR UNCLE BEN

Since first you've wished to own a car A long, long time it's been, So here it is—invite your friends And have a jolly spin.

I will send you the verses for the other relatives later, when Billy and I have had time to think them up. We have some lovely plans for our own little celebration which we are working out too, but you can think of us, if you will, on the twenty-fifth, as pausing a moment in the midst of moment in the midst of

festivities to wish you all, from the bottom of our hearts, the merriest Christmas ever!

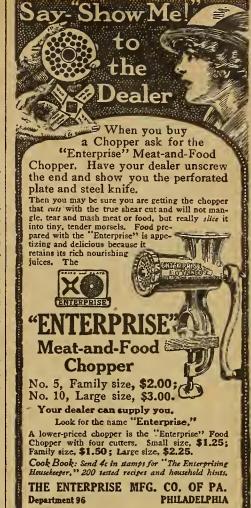
Changing Feather Pillows By Lillian Grace Copp

WHEN changing feathers from one tick to another, sew your new tick to within seven inches of the closing; then sew one side of your old pillow to your new without ripping the old one. After this is done, rip one inch off the old pillow, sew this firmly to one side of your new tick, rip another inch, and sew that to the new tick. Proceed in this way till you reach the end, and fasten securely. fasten securely.

Now hang the old pillow to a line with the new tick hanging down, forcing the feathers down into the new tick until all are out of the old one. Then begin-ning at the top, roll your old tick into a tight roll, rip off one inch, and sew the two sides of your new tick, rip of another inch, and sew the two ends of the new tick, one inch at a time, the same way that you rip. You will find that you have changed the feathers without

you have changed the feathers without the loss of a single one.

Immerse the old tick in water, and when thoroughly wet turn wrong side out, when the down and small feathers that have not already been removed can be rolled off in little rolls. After washing it is ready to be used again. If your old pillow was too hard, make your new tick longer and wider.





White's Weather Prophet Weather forecasts the weather 8 to 24 hours in advance.
Not a toy but a scientifically constructed instrument, working automatically. Handsome, reliable and everlasting.

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or Birds—Which?

Bugs could damage this country more in 10 days than a foreign war could in 10 years! What prevents them? The birds.

Birds are your friends, your crop protectors. Let's all be good to them. No other institution has done as much as The Farm Journal to instil love and guardianship into the hearts of America's boys and girls. Today the Liberty Bell Bird Club—organized and promoted by The Farm Journal—has eight hundred thousand loyal members. But The Farm Journal is always doing things for the farmers and their families. Always trying to make life brighter, happier. It goes into nearly one million homes every month. Why not into yours? \$1 for 5 years. Money back any time. Ask for Free sample and Free copy of the 1917 Poor Richard Almanac.

The Farm Journal

105 Washington Square, Philadelphia



"-and from ceived the most wonderful set of Wear - Ever aluminum cooking utensils.

"You know I always intended to have a 'Wear-Ever' kitchen sometime - and now my dream has come true."

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Housewife's Club

Christmas Gifts for City Folks

By Jane E. Clemmens

RARM products for Christmas gifts—think of it! Mary Jane and her mother concluded that farm products could be utilized to mighty good advantage at Christmas time. Unusual as Mary Jane and her mother were, it is not impossible for others to follow suit and give their city friends a real treat—a farm-product present. They can be made as acceptable and Christmasy as anything from the town shops. In fact, city people will appreciate the farm product gift more than a present selected from a city store.

Mary Jane and her mother went first to the woods for some bittersweet, a little Christmas tree, some northern holly, a few cedar sprays, and a bit of ivy. Then off to the garret for quaint old wall papers, band boxes, baskets, and bits of old-time odds and ends.

The granary, the hennery, the cellar, and the fruit closet with their stores of

The granary, the hennery, the cellar, and the fruit closet with their stores of good things were all at their disposal. The wild game, the nuts from the woods, and even the meat from the pig pen they gayly dressed and utilized to carry the Christmasy message of peace and good will.

The most unusual gifts took the most unusual forms, and the days just before Christmas found Mary Jane and her mother all smiles and eager busyness. No two gifts were wrapped alike. With the pretty wall paper, queer gay ribbons, old-time bindings, scissors, paste, pen and ink, the Christmas wrappings were beautiful and so different, and yet Christmasy every one of them.

Among the many clever gifts were quaint baskets heaped with rosy apples quaint baskets heaped with rosy apples and late pears, topped with a sprig of holly or bit of cedar from the farm woods, and a Merry Christmas greeting card. On nearly all of the cards was written an original verse or a few personal words, making the gift doubly acceptable. Some of the baskets contained both vegetables and fruit.

A round box covered with gay wall paper contained a Christmas mince pie. On the card accompanying the pie was a commingling of ancient and modern verse.

Without the door let sorrow lie; And if for cold it hap to die, Just bury't in a Christmas pye, And evermore be merry.

There were jars and boxes of goodies. Home-made mint, and currant jelly, and strawberry jam daintily wrapped in pretty paper and tied with gay ribbons. Tin cans of delicious home-made sausage and fresh pork, cooked and sealed, were made festive by pasting quaint designs cut from the wall paper and magazine advertisements. Another and magazine advertisements. Another gayly dressed can contained stewed chicken that needed only to be heated and the gravy made of the liquor. A box just the right size to hold a pound of butter wrapped in oiled paper and tied with yellow ribbon was covered with old-fashioned yellow chintz.

Delicious titbits—little tart shells filled with the rich old-time preserves and slices of plum pudding wrapped in oiled paper—were prettily packed in boxes covered with the quaint wall pa-Other boxes contained nut kernels, shelled popcorn, home-made candy,

and dried fruit. There were shallow square boxes of blocks. These were also covered with the wall paper. Each picture or letter block in the box was filled with candy, fudge, nuts, or some goody for the children's delight. One box contained cookies, the good old-fashioned kind. Another flat hox heavifully govered with other flat box, beautifully covered with old-fashioned stuff, contained slices of delicious cake, each slice wrapped in oiled paper and tied with silver cord. And still another flat box held a dozen eggs, each egg carefully wrapped in tissue paper and sealed with a clever design cut from paper or magazine. The eggs were then packed in the box with cotton, sprinkled with glitter.

A cracker box with gay pictures pasted on it and a red tin coffee box which needed no decoration were filled with shelled corn and sent to city friends who were the proud owners of a half-dozen hens.

One pretty package was wrapped in

dark blue stuff and tied with gray dress braid—and just wool dress braid at that. With its sprig of holly it had a festive and Christmasy appearance, de-

cidedly novel and pretty.

Some of the gifts were wrapped in quaint old quilt calicoes and tied with old-fashioned braids and cards. They all had a Christmasy look, and carried a real Christmas message that was sure to be appreciated.

House Plants in Winter

By Ida D. Bennett

THERE are three essentials in the care of house plants in winter—four I might better say, for the first and most important is to select those plants which will do well in the artificial conditions of the house in winter.

Room to stretch out, grow, and breathe is the second, and fresh air and moisture the third, and cleanliness the

moisture the third, and cleanliness the fourth. Do not bring into the house at the approach of cold weather twice the plants you have room for, or so many that the inmates of the home are crowded away from the windows and comfortable corners. Leave a little space between each plant, so that the light and air can reach every side of it.

Do not over-water one day, then neglect for several days until the plant suf-fers for water and the earth is so dry that the water runs through without soaking the entire ball of earth. Better water thoroughly by plunging the pot in a dish of water and leaving it until the water appears at the surface of the soil. Then spray the foliage and you will have a healthy, attractive plant. Hang-



Toweling for Curtains

By Jane Macpherson

OARSE Russian linen, used for kitchen towels, is constantly over-looked in buying curtains. Its decora-tive possibilities are endless. The gray in which it is made is a suitable color for bedrooms when a quiet groundwork is needed for stencil treatment or darning. This material is only fifteen inches wide, but the joining of the widths lends itself to decorative needlework, and a hinged effect in stitching gives it indi-

viduality.
Japanese toweling may also be used effectively for bedroom curtains. It can be had in attractive colors and designs. The material is usually about twelve to fifteen inches wide and is exceptionally reasonable in price.

Expensive lace curtains in large design always seem out of harmony. Light, gauzy effects at the windows to soften the light, and yet sufficiently

it will come to the top of the knife handle. Stitch the edges together on both sides, then proceed to stitch in sections, each section to be the width of a knife blade. This gives the casings for twolve knives. twelve knives

while state. This gives the casings for twelve knives.

Slip a knife into each casing, fold down the top of the holder, and roll tightly. By leaving the back of the holder longer, you have the extra length necessary for perfect exclusion of air. Tie the roll with a piece of the braid left from binding. Holders for spoons and forks are made in the same way, only each holder is made just long enough to meet the requirement for which it is intended. If thoroughly cleaned before putting away, silver thus protected will not tarnish for a long time.

PARASOL NEEDLE BOOK—A parasol needle book makes a useful as well as pretty Christmas gift. Cut a circularshaped piece of dark blue or brown silk, four inches in diameter, and trim the edge with narrow lace. Cut a smaller piece of the same shape out of white flannel and finish in pink or green flannel stitch. Mark the ribs in stitch loops with silk of the same shade, and through the lower of these run a narrow ribbon, thus providing a way of shutting the thus providing a way of shutting the parasol. Through the center of both circles run a small bone or steel crochet hook and fasten in place with silk stitches or a tiny knot of ribbon at the top of the umbrella. Thrust needles lengthwise into the white flannel and the gift is complete. M.T.A., Arizona.

WHEN MAKING NEW COMFORTS—After comforts are bound, take a width of the same material, or goods that will wash, and face the ends with it by running it down on each side by hand, so that it can easily be taken off, laundered, and replaced. By this means the com-fort will be kept in a sanitary condition and will last much longer.
A. B. W., Illinois.

A SEWING HINT—When gathering a skirt or flounce, if one will take all the stitches that will go on a needle and press them together, it almost equals "stroking" the gathers. F. F. C., Ohio.

MENDING VEILING—Nothing is better for mending tiny holes or tears in fine yeiling than a human hair. Thread the hair into a needle and use as you would an ordinary thread, remembering that it is more apt to slip out of the eye of the needle than a thread would be.

L. M. T., New York.

Recipes

CHRISTMAS CAKE—Three-fourths cupful of butter, two cupfuls of sugar, one cupful of milk, candies, spinach coloring, whites of six eggs, two teaspoonfuls of baking powder, two teaspoonfuls of orange extract, three cupfuls of sifted flour. Cream together the butter and sugar, sift together the flour and baking powder, and put all in a baking dish sugar, sift together the flour and baking powder, and put all in a baking dish with the extract and milk. Beat for ten minutes and then beat in the beaten whites of the eggs. Bake in a round pan for nearly an hour. Let cool, and frost with a white icing. While this is still soft add a little spinach juice to confectioner's sugar and force through the end of a very small funnel in a wavering wreath around the cake. Add wavering wreath around the cake. Add a few outlined holly leaves, easiest made by laying the leaf lightly on the frosting and putting the thin line of colored sugar about it, and plenty of small red wintergreen or cinnamon candies put on to represent the holly berries. L. M. T., New

VIRGINIA HAM-Cut slices of ham about three-fourths inch thick. one cupful of brown sugar and add to this one tablespoonful of mustard. Spread this mixture on each side of the ham, place in a baking pan, the bottom of which is covered with water. Bake until tender. R. S., Wisconsin.

SOUTHERN EGG DISH-Heat an earthen dish over a moderate fire and drop in a piece of butter. Season with one onion minced fine, a little red pepper, and a small saltspoonful of fine salt. Break six eggs very carefully into the dish, and cook until the whites set. Turn carefully, cook until done, and serve hot from the dish in which they were cooked.

A. N. T., Georgia.

MARGUERITES—Boil one-half cupful of sugar and one-half cupful of water un-til it threads. Remove to warming oven and add three marshmallows. Let these dissolve gradually. Pour this syrup onto the beaten white of one egg. Add one tablespoonful of cocoanut and one-fourth teaspoonful of vanilla. When tle more than twelve times the width of a knife.

Bind the four sides with a fancy braid, and fold over the bottom so that braid, and fold over the bottom so that slightly in the oven.

J. M., Ohio.

Small Girl's Crocheted Tam



THIS cap will keep snug and warm the ears of the little girl from four to ten years old as she plays out of doors these cold days. Full directions for making it will be sent by the Fancy-Work Editor, Farm and Fireside,

ing baskets require more water than pots. If in wire baskets, plunge in a pail of water twice a week until thoroughly soaked.

A WELCOME SEAL—A friend of mine last year in sending packages to her intimate friends used a tiny snapshot of herself as a seal. The recipients were delighted. M. A. P., Kansas.

IF THE WHITES OF EGGS will not beat to a froth quickly, add a pinch of salt. R. L. C., Nebraska.

WHEN A CHILD IS ILL—A small tree decorated with grapes, oranges, apples, and small fruit, each wrapped in silver and gold paper, gives an inestimable amount of pleasure to a child that is ill and prevented from taking part in the festivities. L. G. C., Massachusetts.

WHIPPING CREAM—When cream will not whip properly, try adding a few drops of lemon juice. It will whip almost instantly; however, care must be taken not to add too much lemon, for that will make the cream curdle.

L. A., Illinois.

transparent not to exclude the view, are better. They can be bought with simple edging or an insertion of torchon lace in soft, creamy tones, and seem suitable for all occasions. Bobbinet also makes a pleasing curtain. The large, open mesh does not keep out the light.

It should be the purpose to get away from the commonplace. It is not practicable or possible for many to make their own furniture or weave their rugs, but it is possible for every home to ex press the individuality of the owner in the choice of beautiful and original

A Holder for Flat Silver

By Esther Andrews

A HOLDER for flat silver that will prove a boon to every housewife is made from heavy Canton flannel and a few minutes' time given to the making. Measure off the flannel twice and one half the length of each knife, and a lit-



No. 3095—Maternity Waist with Fichn. Sizes, 34 to 42 bust. (Order hy normal hust measure.) Pattern, fourteen cents

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HOME-MADE underwear, dainty and long-wearing; the indispensable apron; comfortable children's underclothes; a novel maternity dress, and a simple afternoon gown—these are the varied patterns to meet your sewing And remember, the new service needs. is better service.

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No. 3194—Chemise with or without Envèlope Closing. 32, 36, 40, and 44 bust. A hecoming model for any figure. Pattern, fourteen cents

No. 2931—High-Neck, Long-Sleeve Nightgown. 32, 36, 40, and 44 bust. For use on the sleeping porch. Pattern, fourteen cents

No. 3038—One-Piece Apron, Buttoned in Front. 32, 36, 40, and 44 bust. Covers any dress completely. Pattern, fourteen cents

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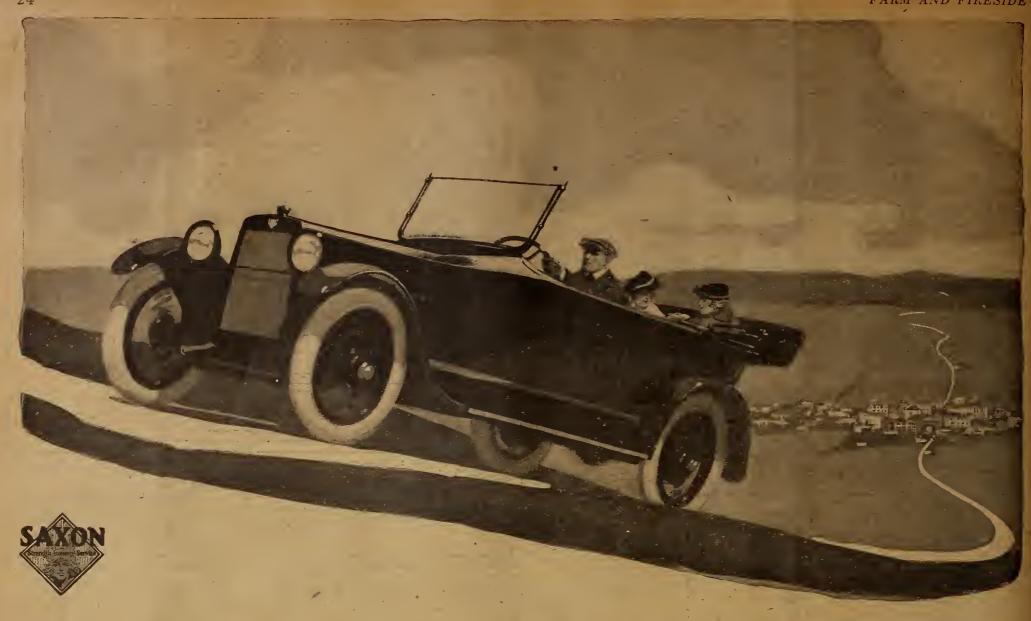
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"A Car That Will Out-perform Any Other in Its Price-class"

After all, performance is the most jealously prized motor car attribute.

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Since the first Saxon "Six" went into service some two years back it has been passing through a constant state of development.

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Uniform torque—perfect power-flow—was the standard sought and now attained.

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Consider, for instance, a comparative case if you would know how surprisingly Saxon "Six" surpasses any other at less than \$1200.

Running one of the best known cars of less than six cylinders at 20 miles per hour there are 1512.73 power impulses per minute.

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That is to say Saxon "Six" produces 97.9% more impulses per minute at a 20 mile per hour speed than this well-known car of "less-than-six-cylinders." This is practically perfect continuity of power-flow.

Think how much less friction there is in the Saxon "Six" motor.

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Translated into dollars and cents, think how little will be your repair service cost on Saxon "Six" as compared to the car with less-than-six-cylinders.

You will find the super-ability of this Saxon "Six" motor reflected to your benefit in many ways.

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This "less-than-six" we cite required 30 seconds in that

Third, in amazing flexibility. Seldom indeed do Saxon "Six" owners resort to gear shifting.

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In a noted Eastern hill-climb; at the San Diego Exposition, competing with higher-priced sixes, eights, and twelves; and in many other public tests, as well as in everyday private performance, Saxon "Six" had definitely demonstrated its superior prowess on hills and in heavy going.

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